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ABSTRACT

This collection of four papers (each with a response) given at a 1987 symposium focuses on a renewed consideration of literacy in America and its implications for national, state, and local policy. The papers include "Definitions of Literacy" (Richard L. Venezky); "Literacy for What Purpose?" (Larry Mikulecky); "Measuring Adult Literacy" (Irwin S. Kirsch); and "Policy Implications of Literacy Definitions" (Jeanne S. Chall). A concluding section summarizes the basic issues raised in the papers and gives an interpretation of the positions presented on each. (RS)

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Toward Defining Literacy

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Contents

Foreword *v*

Preface *vii*

Introduction *ix*

Part One: Definitions

Definitions of Literacy 2
Richard L. Venezky

Definitions of Literacy: A Response 17
Reynaldo F. Macías

Part Two: Uses

Literacy for What Purpose? 24
Larry Mikulecky

Literacy for What Purpose?: A Response 35
Arlene Fingeret

Part Three: Measurement

Measuring Adult Literacy 40
Irwin S. Kirsch

Measuring Adult Literacy: A Response 48
Thomas G. Sticht

Part Four: Policy

Policy Implications of Literacy Definitions 54
Jeanne S. Chall

Policy Implications of Literacy Definitions: A Response 63
Carl F. Kaestle

Part Five: Summary

Gathering Up, Looking Ahead 70
Richard L. Venezky

Foreword

Literacy is a topic much on the public's mind these days. It is one of those subjects on which all laypersons think they are experts. When it comes time, however, to establish measures of illiteracy rates or to set policies, it becomes apparent that we know less than we thought we did. It is some small comfort to know that specialists also have their differences.

To identify the parameters in this vital area, a group of educators met in the fall of 1987 at a symposium jointly sponsored by the National Advisory Council on Adult Education and the University of Pennsylvania. Their purpose was to "get back to basics"—in this case, to define the term *literacy* itself, to draw attention to the multiple senses subsumed by the catchall words *literate* and *illiterate*. The interests and perspectives of participants differed, and debate was lively; but eventually it became possible to interpret various speakers' usages in light of their specific disciplinary interests and their concerns for more philosophical questions, such as the purposes of literacy or whether increases in literacy would primarily benefit the individual or society.

The subject has been a focus of attention of the National Advisory Council on Adult Education since its inception in the early 1970s, and of the Literacy Research Center at Penn's Graduate School of Education as well. In recent years, Penn's faculty and students, with the cooperation of its administration, have been involved in programs for the revitalization of Philadelphia's public schools. A certain pragmatism—traceable to the educational tenets of the University's founder, Benjamin Franklin—combines with the activities of a modern research university to attack a major problem of our time. Since the symposium was held, interest in the subject has grown in the country at large, with acts introduced in Congress and much publicity resulting from the attention of First Lady Barbara Bush.

The subject of literacy has political, social, and educational implications. Although illiteracy usually is associated with poverty, other factors also are involved. For example, English is not the first language for many individuals in the United States. Attempts to increase literacy at the lowest

levels may easily work to the detriment of people who are economically and culturally deprived, serving as what might be described as a "two-edged scabbard"—a protective device that may do as much to perpetuate inequality as to provide the basic skills for survival. Similarly, literate Americans, secure in their mastery of a dominant language, might do well to reflect on their own functional illiteracy and dependence in most areas of the world.

Interest in literacy has grown steadily since the 1987 symposium. The views expressed and the issues debated there continue to provide a starting point and a valuable point of reference. Such exchange in a university setting provides a solid foundation for further debate, as well as for national policy decisions, which are best based on responsible research.

Sheldon Hackney, President
University of Pennsylvania

Preface

The chapters in this volume were originally commissioned by the National Advisory Council on Adult Education and the Literacy Research Center at the University of Pennsylvania in an attempt to bring a renewed consideration of adult literacy in America and its implications for national, state, and local policy. The papers were presented at a symposium at the University of Pennsylvania on September 28, 1987, and later revised for this publication. To encourage an exchange of ideas, each main topic was developed by one author and responded to by another. The papers are presented here in the same order as presented at the symposium. A concluding chapter summarizes the discussion and debate that ensued at the symposium.

Sponsorship of these papers is shared by two organizations committed to the improvement of adult literacy abilities. The National Advisory Council on Adult Education was established by Congress in 1970 and extended by the Educational Amendments of 1984. The fifteen members of the Council, representing state and local public school officials, specialists in adult education, and members of the general public, are appointed by the President and serve three-year, staggered terms. The Council's primary responsibility is to advise the President, the Congress, and the Secretary of Education in matters related to the administration of the Adult Education Act of 1970. In pursuit of this goal, the Council appointed a Literacy Committee that was asked to "assist in the development of a national standard of literacy which would include accepted definitions of specific levels of literacy." Among the Council's more recent activities was the publication in 1986 of *Illiteracy in America: Extent, Causes, and Suggested Solutions.*

The Literacy Research Center is a research unit within the Graduate School of Education at the University of Pennsylvania. Established in 1983, the Center has two major objectives: to help develop policy on literacy-related problems through basic and applied research, and to promote dialogue between literacy researchers and practitioners and service providers in the field. To these ends, the Center maintains research and

development programs, holds conferences and workshops, and issues technical reports and a newsletter. Its staff includes faculty members with appointments within the Graduate School of Education, researchers from across the university, visiting scholars, and graduate students.

We did not expect either before or after these papers were prepared to end the discussion and debate on what literacy is and how it functions within a modern society. We did, however, intend to focus attention on the more basic issues that attend literacy and literacy definitions and to present alternative viewpoints from a wide range of disciplines. While only the readers can judge how successful this endeavor has been, we are pleased to be able to present these papers in a single volume and are grateful to the sponsoring organizations and to the International Reading Association for their assistance in making this collection possible.

RLV
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Introduction

Social concepts such as literacy and poverty are integrally tied to their labels. Like jelly and sand, they are without intrinsic shape, defined and redefined by the vessels that hold them. Who is literate depends upon how we define literacy—whether it is a minimal ability, evidenced by the oral pronunciation of a few simple lines from a primer, or a more advanced complex of skills, requiring numeracy, writing, and reading together. For many terms in the English language, such uncertainty of denotation might be a challenge solely to academics, with the outcomes evidenced only in a few esoteric journals and in the fine print at the end of a few dictionary entries. But for literacy the stakes are much higher, involving opportunities for personal advancement, labor force participation, and national awareness.

The origins of discussions of literacy boundaries in social life go back several centuries. Ever since colonial explorers made it their *mission civilatrice* to bring imperial culture and education to poor, uncivilized, ignorant, and illiterate "savages" around the world, there have existed political, cultural, moral, and instructional dimensions to the provision of literacy. Of course, what constituted savagery depended greatly upon the perspective of the colonialists. A century or two later, when public education began in Europe, the same discourse appeared in the mother countries themselves—how to provide for the poor, uneducated, and illiterate masses at home.

Obviously, the use of the term *illiteracy* in such descriptions of the poor and destitute cannot be seen in terms of the ruling classes' interest in the betterment of the peoples they ruled. Nonetheless, the category of illiteracy was certainly more accurate two centuries ago than it is today. What makes a volume on defining literacy so important now is that the diverse communities that make up contemporary America are so variegated that simple dichotomies such as literate-illiterate fail to capture what are real differences in what people know and how they behave in certain situations.

For example, is a recent immigrant from Vietnam illiterate if he or she can read and write in French and Vietnamese but not in English?

Defining literate/illiterate by linguistic boundaries falls in the realm of politics, not in the realm of science. But other dichotomies present thorny problems for an accurate scientific understanding of literacy. To take another example, what constitutes illiteracy in the workplace? Only an in-depth analysis of the context of work can provide the answer. As documented by the popular press, it is possible for some individuals to function adequately for years in their jobs without their coworkers learning that they cannot read the daily newspaper. Whether such people have truly performed adequately can be determined only by investigation.

Yet, no matter how desirable it may be from an administrative or political perspective to set literacy standards for specific contexts, it is remarkably difficult to ascertain exactly what literacy skills might be required for specified performance levels. Even if a given performance context were adequately analyzed, local or societal changes might force reanalysis. While performing such analyses is not impossible, it does entail serious empirical work, and simplistic pronouncements about the nature or correction of illiteracy do not make it easier.

Since the mid-nineteenth century, most Western industrialized nations have funded education for their citizens, with literacy as a primary goal. Modern citizenship requires literacy for full participation in the processes of society—work, home management, child rearing, and voting. For many countries, the definition of literacy determines the level of involvement in and consequently the level of financing of basic education. For citizens who wish to better their lot in society, literacy is a fundamental enabling skill, but the amount of literacy needed is a difficult decision to make. Indeed, a methodology for determining how literate a person is still remains problematic. Should adult literacy tests look like school reading tests, with multiple-choice questions built around excerpts from stories and short expository articles? Or should such assessments require appropriate responses to everyday literacy tasks, such as determining what benefits an insurance policy provides or how to reset the time on a digital thermostat?

Our continuing national concern for literacy is reflected strongly in many of the actions of the past two Congresses. Besides various joint hearings on literacy by the Ninety-ninth Congress House and Senate committees responsible for education legislation, several existing programs were amended to make explicit their roles in providing literacy and other basic educational services to young persons and adults. One example of this was an amendment to the Job Training Partnership Act that requires that summer youth programs assess youngsters on basic skills and provide remediation when appropriate. In the One-hundredth Congress, the Even Start

Program was authorized, providing funds to literacy programs that serve both parents and their young children. Literacy considerations also appeared in legislation dealing with welfare reform and with trade (e.g., the Workplace Literacy Program in the Department of Labor).

In all of these actions, assumptions about the definition of literacy were revealed, usually through the size or extent of the literacy/illiteracy problem invoked. But few agencies that report on the literacy abilities of Americans make explicit what they mean by literacy. And few agreements can be found in national reports on the literacy abilities of the public. For example, Louis Harris and Associates (1970, 1971) reported that 13 percent of the U.S. adult population was functionally illiterate, based on their abilities to fill out simulated forms. About the same time, the Adult Performance Level Project, using a test that combined functional literacy skills with other adult skill areas (e.g., communication, mathematics), classed 54 percent of the adult population as marginally competent or lower.

In this decade, the U.S. Census Bureau, using self-report, found a significantly lower rate of illiteracy than reported by either the U.S. Department of Education or the Coalition for Literacy. To choose among these competing evaluations, we need to know not only who was assessed and how, but also what relationship each assessment had to the full range of literacy tasks encountered by modern citizens. Presently there is limited agreement among either researchers or practitioners on which skills comprise literacy. Until there is general agreement on how literacy should be defined and assessed, neither Congress, the Department of Education, nor any other agency or person will be able to decide whether there are 60 million, 27 million, 17 million, or 2 million functionally illiterate Americans.

No matter how literacy is defined, the extent of America's literacy problem and its cost to the nation will be difficult to disguise. We spend as much on elementary, secondary, and college education each year as we do on defense—about 7 percent of the GNP—and then we spend millions more in businesses, industry, and the military on remedial programs for the skills not acquired in schools. Basic skills programs—particularly for reading, writing, and elementary mathematics—are fixtures now even in colleges and universities. These programs teach what elementary and secondary schools try to teach, but that, in spite of recent attempts at accountability, is not acquired by many of those the schools certify as satisfactory graduates.

The casualties of the current situation are our youth, approximately one million of whom drop out of school each year. And many of those who remain do not acquire the abilities needed to enter into the mainstream of

American society. Unfortunately for the individuals involved and for the country, this problem is especially acute for minorities and for those whose parents received less than a high school education. We see no quick fix for these problems, but we do believe that a better understanding of the nature and extent of literacy is essential for planning any reasonable solution.

The chapters in this volume are focused on the definitional component of these literacy issues, addressing the psychological, linguistic, political, and sociological consequences of different literacy definitions. The first four sections explore the definitions of literacy, the purpose for literacy, how literacy can be measured in adults, and the policy implications of different literacy definitions. A final chapter summarizes the issues raised, both in the papers and in the conference discussions, and attempts to define what common ground, what new or refined perspectives, might have emerged from the present endeavor. No attempt is made to survey or investigate literacy programs or to analyze literacy instruction methods. These, among many other issues of adult literacy, are left for other days and for other volumes.

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16

Part One

Definitions

1

Definitions of Literacy

Richard L. Venezky

> Lexicographer: *a pestilent fellow who, under the pretense of recording some particular stage in the development of a language, does what he can to arrest its growth, stiffen its flexibility, and mechanize its methods.*
>
> *(Bierce, 1906, 1958)*

My task here is not mere definition, but navigation among aspirational, psychological, educational, and political intentions of the term *literacy*. Unlike such lexical entries as *oxide*, *birch*, and *tibia*, this word has no neutral, precise definition. It is one of that class of autopositive terms, like *liberty*, *justice*, and *happiness*, that we assume contain simple, primal qualities – necessary and desirable attributes of our culture – but that under scrutiny become vastly more complex and often elusive, yielding to no simple characterization or definition. While a few (Olson, 1975) have questioned the desirability of universal literacy, most have accepted without debate its desirability and have focused on methods by which it could be endowed on entire populations.

My goal is to open to critical examination the various contemporary meanings offered for literacy and to outline a set of definitions, established according to the needs of both pedagogy and national policy. This is not a survey of *literacy speak*, nor an assessment of the practicality or desirability of particular literacy goals, but a focused analysis of central terms and their usage. My method is primarily that of stepwise refinement, aided by the pragmatic method as practiced by James (1907, 1955, p. 42), that is, of "trying to interpret each notion by tracing its respective practical consequences." Historical material will be added for seasoning and decoration, but the primary emphasis will be upon the present.

Literate/Illiterate and Literacy/Illiteracy

The most basic terms to attend to are the adjectives *literate/illiterate* and the nouns derived from them: *literacy/illiteracy. Literate/illiterate* derived from the Latin term *literatus,* which for Cicero meant a learned person. In the Middle Ages, a literatus was one who could read Latin. The exclusion of writing from the more common definitions of literatus resulted from the difficulty of mastering the processes required of parchment and quills. On this general issue, Furet and Ozouf (1982, p. 76) point out, "We are inclined to forget, today, that for a long time writing was really a technical exercise, involving instruments, muscular gymnastics, and a knack." After the year 1300, literatus came to mean *minimal* ability to read Latin, mainly because of the breakdown of learning that occurred during the Middle Ages (Clanchy, 1979). With the spread of vernacular languages, particularly after the Reformation, a literate person came to mean one who could read and write in one's native language.

Although the term *literacy* does not appear in the English lexicon until near the end of the nineteenth century, the modern concepts of literate and illiterate date from the last half of the sixteenth century. Remnants of the classical definition, however, survived until at least the 1790s. Lord Chesterfield wrote in 1792 that an illiterate was one "ignorant of Greek and Latin" (cited in the Oxford English Dictionary, s.v. "illiterate"). When literate or literacy are employed as references to high abilities, modifiers such as *advanced* or *high* usually are inserted. Thus, in an essay prepared for The Center for the Book at the Library of Congress, Asheim (1987) refers to the highly literate to identify those who read Faulkner and Wittgenstein.

> One can be literate by official definition, and still not be able to ferret out the meaning of many forms of prose presentation. The term "functional illiteracy" takes cognizance of that at a fairly low level, but there are differences in the ability to interpret that can occur even among those who are highly literate as well (14f).

Modern usage recognizes that, shorn of all qualifiers and exposed to daylight, the term *literate* connotes a lower level of some quality, rather than the more advanced or even average levels. Asheim further points out that literacy is not a uniform quality, even at its high levels, but one that is "tied to a way of thinking, an acceptance of conventions of the form, and a mind set (1987, p. 15). In writing about literacy in Anglo-Saxon England, Wormald (1977) uses *pragmatic literacy* to refer to lower level functional literacy and *cultured literacy* to refer to Asheim's higher literacy.

As a first step in defining literacy, therefore, I will qualify the range of abilities referred to as minimal or near minimal for some goal, as opposed to advanced, as was indicated in classical times. Furthermore, I will as-

sume that literacy skills center on the use of print and that at a minimum use of print requires reading and writing. The addition of writing to the definition of literacy appears to be a contribution of the Reformation. Spufford (1981, p. 149) states " '*Literate*' by definition implies the ability to write." Nevertheless, literacy is still occasionally used in reference to reading alone. For example, a military test based on the difference between reading and listening, without assessment of writing, is labeled *Experimental Literacy Assessment Battery* (Sticht & Beck, 1976). Cipolla (1969) proposes the terms *semiliterate* and *quasiliterate* to refer to those who read but cannot write. Cipolla also uses these terms for those who read and write poorly, but this usage addresses the problem of labeling points or regions on a continuum from zero literacy to the fullest literacy, a problem that will be attended to more fully. Because of their imprecision, *semiliterate* and *quasiliterate* offer little help in our search for adequate nomenclature.

More problematical than *literacy* is the term *illiteracy*. With some exceptions, illiteracy tends to be applied to those who fall below some recommended criterion level, no matter how arbitrarily derived that level might be. Thus, by some definitions those who read and write simple messages are placed in the same class as those totally ignorant of writing and alphabets. Furthermore, the terms are often defined asymmetrically. Webster's *New Collegiate Dictionary* (1954) defined *literate* as "able to read and write" but *illiterate* as "unable to read." (This was changed in *Webster's Ninth New Collegiate Dictionary* (Mish, 1984).) Although the term *literate* is often modified to refine what level of literacy is implied (e.g., highly literate, marginally literate), illiteracy is rarely made more specific. I will reserve the term *illiterate* for those lacking totally in reading/writing knowledge.

Functional Literacy and Its Domain of Reference

One of the first tasks in refining the meaning of *literacy* is to attend to all of the phrases that include this term, such as conventional literacy, functional literacy, survival literacy, marginal literacy, and functional adult literacy. Most writers tend to treat literacy according to ideas first operationalized by Unesco in the 1950s. In several seminal studies done by that agency, literacy was viewed as a continuum of skills, including both reading and writing, but applied in a social context (Gray, 1956; Unesco, 1957). Literacy requires procedural knowledge—the ability to do something, as opposed to declarative knowledge—knowing of something. For

convenience in reporting and in policy making, the statistical division of Unesco proposed in the late 1950s that literacy statistics be recorded according to those reaching a minimal level and a functional level. The former implies the ability to read and write a simple message; the latter implies a level of literacy sufficiently high for a person to function in a social setting.

The phrase *functional literacy* suggests the possibility of a *nonfunctional literacy.* One form of nonfunctional literacy may have been implied by Margaret M. Heckler, who in reporting the results of the Survival Literacy Study (Louis Harris and Associates, 1970) to the U.S. House of Representatives, contrasted reading ability as a survival technique with reading ability as an academic pursuit. (See *Congressional Record,* November 1970, Volume 116, Number 184.) One of America's most popular dictionaries supports this contrast by defining the adjective *academic* as "very learned but inexperienced in practical matters" (Mish, 1984, p. 48). As embarrassing as this may be for those of us who prowl the academic corridors, the distinction between functional (practical, useful) literacy and school-based (academic) literacy is incorporated in everyday usage. While plain vanilla literacy is hardly nonfunctional, the types of literacy taught in most elementary schools seldom include the practical uses of reading and writing in everyday life. Thus, even though it may be redundant, the phrase functional literacy may help convey the sense of social relevancy that is critical for a proper understanding of literacy.

The phrase *functional adult literacy* (Nafziger et al., 1976), represents a further attempt to make explicit a word's definition. The issue that the term *adult* raises derives from the need to include social relevancy in the definition of literacy. That is, if literacy is some complex of skills demonstrated in socially relevant contexts, then it is logical to assume that until one approaches adulthood there are not sufficient opportunities to apply these particular skills, and therefore they cannot be adequately assessed.

This is confirmed in part by the reporting practices of a number of social agencies. The U.S. Census Bureau, in reporting literacy statistics from 1870 through 1930, applied them only to persons ten years of age or older. In 1959 and 1969, the reporting for literacy statistics was confined to those fourteen and older. In contrast, the Division of Adult Basic Education in the U.S. Office of Education reported its data for persons sixteen and older. The Unesco Expert Committee on Standardization of Educational Statistics recommended that "if this question [on literacy] is confined to the population above a stated minimum age, the minimum should not be higher than fifteen years" (Unesco, 1957, p. 21). It is doubtful that we

would call a two-year-old who does not read and write illiterate. On the other hand, would we so label a ten-year-old who does not read and write?

If literacy is an ability that is demonstrated in such contexts as work, voting, and home management, then the measurement of literacy rates for any population is most logically done at the age levels where these activities have meaning for that population. For most of the population in the United States, work permits cannot be obtained prior to the age of sixteen, and voting in national elections does not become possible before age eighteen. What is meaningful, however, is not simply the ages when a few major transitions occur, but the age range during which a person is expected to interact with society more as an adult than as a child: to understand and be responsible for the regulations of automobile driving, work, and common commercial activities; to be aware of local, regional, and national events; to travel on one's own; to select and engage in recreational activities; and to negotiate the more common components of education and social life.

Coupled with these criteria are those that derived from the extended nature of modern education. While in Colonial and early nineteenth century America formal education often ended at age seven or eight when a child was ready to enter the labor force, children today in some countries do not begin formal schooling until age seven. But even when children began working at seven or eight it was not expected that they would function as adults vis-a-vis society in general, and no one expected fully literate behavior at such early ages. It seems reasonable, therefore, to continue to use literacy as a referent for adult or near-adult abilities and to avoid such compounds as functional adult literacy or functional child literacy. We do recognize that the skills that underlie literacy develop over many years and develop unevenly over any large population of students. We can speak of the levels of development that any person might have attained in the various skill areas that literacy requires, but it probably is not meaningful to report literacy as such prior to the age of sixteen. At issue here is not the meaning of literacy for individuals, but its meaning to society. Literacy rates are meaningful as indicators of population characteristics only when applied to those who need to be literate.

A more subtle issue is raised by Fisher (1978), who claims that individuals who can cope within environments in which print processing is required are by definition functionally literate, regardless of whether they can pass reading and writing tests. Fisher may be claiming that the mechanisms through which one obtains meaning from print (and communicates with it) are not relevant to the determination of functional literacy. Thus,

through oral means, coupled with an awareness of nonverbal cues, one might perform satisfactorily, or at least appear to do so, in a context where print processing is frequently required. Whether this speaks to the definition of literacy or to the follies of middle management in some organizations, we cannot determine from available evidence. I will without further discussion reject Fisher's argument and continue to define literacy as requiring a defined set of skills as opposed to a coping behavior that might be based on deception, avoidance, or the literacy skills of others.

A similar issue was raised many years ago in the report of an American soldier during World War II who received letters written in Russian from his immigrant parents. The soldier understood spoken Russian but could not read it. Another soldier in his unit had learned to pronounce Cyrillic script even though he could not understand Russian. Therefore, the latter soldier pronounced the script and the addressee listened, thereby coming to know the content of the letters. The issue raised by this process was "Who is reading?" The simplest answer is either, neither, or the two together. By definition, neither reads Russian by himself.

Of the other phrases cited at the beginning of this section, *conventional literacy* is synonymous with *functional literacy,* only carrying perhaps slightly more emphasis on the everyday, nonwork related uses of print. *Marginal literacy* and *survival literacy* are attempts to define cuts along a functional literacy scale, an issue to be examined next.

The Skill Requirements of Literacy

The view of literacy as a complex of skills is reflected in the NAEP Adult Work Skills and Knowledge Assessment that was done in 1973-1974 and in the Adult Performance Level Functional Literacy Test that was also developed in the mid 1970s (Nafziger et al., 1976; National Assessment, 1976). In these surveys, literacy skills were defined in terms of the print demands of occupational, civic, community, and personal functioning.

In these and other literacy surveys, (e.g., Kirsch & Jungeblut, 1986), four basic types of skills are consistently included: reading, writing, numeracy, and document processing. On the inclusion of reading as a component of literacy, there is no argument, but on the types of reading and the criterion levels for basic or functional competency, there still is not widespread agreement. School-based reading assessments are generally based on continuous texts (fiction and nonfiction), with items that draw on a

range of vocabulary and comprehension skills. Scaling and reporting is generally done in grade level equivalents, a practice that has limited utility for adult assessment (and problematic application to school-based assessment).

Some adult reading demands clearly differ from those imposed on children. As an example, consider the skills required for reading exit signs while driving on a freeway at 55 miles per hour or for reading subtitles on a foreign film. Both tasks may require reading speeds beyond those attained by the average fourth grader, yet may not require significantly higher comprehension levels, especially with the other cues available.

On the literacy requirements for writing, we have limited empirical evidence for establishing competency levels. Between Thorndike's (1910) handwriting scale and the recent discovery of process writing, relatively little work was done on the cognitive demands of writing. The rediscovery of the work on writing by Vygotsky (1962) and Luria (1978) and the current studies on the writing process have reconfirmed Samuel Johnson's claim that "What is written without effort is in general read without pleasure." As Vygotsky (1962) claimed, writing requires ability in abstract, deliberate activity. We are, however, far from developmental norms for composition, in spite of expanded research and assessment activities (e.g., Applebee, Langer, & Mullis, 1987; Martlew, 1983; Whiteman, 1981).

On numeracy, there is a growing consensus that at least basic competence in this area is required for literacy, but exactly how much has not been thoroughly discussed. One argument is that numeracy beyond addition and subtraction is too specialized to include in a definition of basic literacy. If we do include higher levels of competence in multiplication, division, and operations with percentages, then we eliminate from the ranks of the literate a noticeable proportion of America's young adults (Kirsch & Jungeblut, 1986). A more reasonable approach is to confine functional literacy to those basic numeric operations that are critical for ordinary meaning of print: basic addition and subtraction, comparison (greater than, less than), dates, times, and perhaps a few others. Deciding exactly what to include must await a thorough analysis of the literacy tasks of everyday life.

A fourth skill domain in functional literacy is document processing. This category is perhaps the most difficult to define empirically, due to the limited amount of research done on it. Most notable is the recent NAEP Young Adult Literacy Assessment, which examined literacy abilities with tasks based on common documents (Kirsch & Jungeblut, 1986). The moderate correlations found between the literacy scale based on documents and

those based on prose and quantitative analysis indicate that document processing makes a significant independent contribution to literacy ability.

Document knowledge is usually defined as the ability to cope with different document formats, such as job entry forms, tax schedules, television schedules, advertisements, and labels on products. It is critical, however, to think about the skills that go into the processing of these documents and to analyze their psychological demands. Document processing tends to differ from reading fiction in that most document processing is initiated by a narrowly defined task that usually requires selective processing, whereas fiction reading usually has a general, diffuse task (e.g., read and enjoy) and assumes complete or nearly complete reading. Document processing tasks, such as finding an entry in a train schedule, often require specialized knowledge relevant to a particular document format. Finding information in such contexts is more like problem solving than like comprehending plot, character, or author's purpose in reading fiction.

In concluding this section, I feel compelled to muddy the skill issue by pointing out that, both psychologically and by common practice, the skills I defined are not equal partners in the literacy business. Reading is clearly primary to any definition of literacy and, in some sense, the others are secondary. Writing, as a means of recording and communication, presupposes reading; otherwise, it is mere copying. Similarly, numeracy and document knowledge are supplementary to reading and have no role in the literacy equation without it. The skilled reader, ignorant of numeracy and document formats, still will obtain significant amounts of meaning from print. On the other hand, the nonreader who is skilled in arithmetic and in document styles will usually stumble in an environment based on print. Most of our concern is with those who do not read well and therefore need the added facilitation that derives from knowledge of specific document formats and from numeracy.

How Literate Is Literate?

Variable Criteria

In the previous sections, I touched on the criterion level issue for literacy. The first part of this issue concerns the criterion level required for any given definition of literacy. The second is whether for the United States (or any other political unit) a single criterion level and, therefore, a single form of literacy is adequate for educational and political needs at a given

point in time. (The issues related to changes in literacy demands over time are discussed in a following section.)

The argument I would like to develop is that literacy, as a socially defined concept, represents an aspiration as much as it does a reality. Although we can define differing types of literacy for different regions of the country, different social strata, and different levels of involvement in society, from a national policy perspective equality of opportunity is the standard and, therefore, only a single definition of literacy has meaning, applied to all citizens. To accept different definitions of literacy for different regions of the country and to promulgate policies that would tend to perpetuate these differences would be inconsistent with the current equity goals of this country. To afford less training to someone living in Mississippi than to someone living in Illinois would be to value the former less than the latter.

This is not to claim that the literacy demands of different regions, occupations, or lifestyles do not differ, nor is it to say that we can define easily what this national literacy is in terms of both skills and competency levels. Most of that challenge remains. Nevertheless, as long as literacy remains a national concern, it is incumbent upon the government to strive for an understanding of the general literacy needs of work, citizenship, housekeeping, and private life; to seek effective means for assessing these needs; and to encourage assistance to those who fall below certain minimal levels of performance, no matter how arbitrarily set.

Critical Levels

Literacy abilities in any population vary from none (or almost none) to advanced beyond the level where measurement has any meaning. The choosing of any point along this continuum to define minimal ability for functional literacy incurs the risk that all of those below that point will be incorrectly labeled illiterate. We might consider a suggestion made by Unesco (1957) to report minimal literacy and functional literacy. Cross-national studies of reading processes suggest that a common core of psychological abilities may exist for reading and, in particular, for reading alphabetic and syllabic writing systems. These processes involve primarily the coordination of eye movements into fixations and subsequent saccadic jumps, the acquisition and utilization of symbol-sound correspondences, the building of rapid identification of word units through the integration of information from a variety of sources, and the use of local and global processing to obtain meaning (Downing, 1973; Gray, 1956; Henderson, 1984;

Koriat, 1985; Seidenberg, 1985). The basic or minimal level of literacy corresponds to what Gray (1925) and Chall (1983) call Stage 2 in their respective development schemes. This might also be the minimal level required for self-sustained development in the reading component of literacy. Gray (1956) assumes that four to five years of schooling are required to allow competent reading to continue beyond schooling. This may be true in western countries today, assuming that schooling begins in the age range of five to seven, but historically, vast segments of the American population became literate with less than this amount of schooling.

What has changed in learning situations between 1800 and now is an issue beyond the interest of this chapter, but one worthy of further investigation. I suggest that if empirical investigations continue to support a universal set of basic reading skills, and similar levels can be defined for writing, numeracy, and document knowledge, we then define two levels of literacy: *basic literacy* (which I prefer over *minimal literacy*), which applies to the level that allows self-sustained development in literacy; and *required literacy*, which is the literacy level required for any given social context and which might, therefore, change over time, place, and social condition. *Functional literacy* remains useful as a general designation of abilities above basic literacy, allowing some level of functioning through print in society. Deciding what levels of competency are required in the four component skills must await further exploration of literacy needs. I do suggest that we reject as inadequate and misleading the use of grade level equivalents for literacy levels.

One drawback to applying grade level reading scales to literacy ability is that these levels are based exclusively on reading, with no assessment of writing, numeracy, or document processing. While there always will be a moderate correlation between reading ability, as measured by school-based tasks, and adult literacy, to claim that any given grade level of reading ability is necessary for literacy ignores first the fact that other skills also are involved and second, that the skills may interact in nonobvious ways such that relatively low levels of reading may be compensated by higher levels of other skills. This is not to claim that certain basic levels are not required of all skills to reach even basic literacy. Rather, it is a caution that there is little empirical justification for claiming that eighth or twelfth grade reading levels, for example, are needed for present day literacy (cf. Bormuth, 1975; Carroll & Chall, 1975). The second drawback is that reading grade level equivalents are based on school-related reading and are derived from children, not adults. The role of background knowledge in reading has been a central focus of recent comprehension research (e.g., Tierney &

Cunningham, 1984). It is evident from this research that an adult and a child, bringing different types of experiences and knowledge to the same reading task, may demonstrate the same outcomes with widely varying reading skills.

Most readers show differing reading abilities across different types of material. For example, Pressey and Pressey (cited in Gray, 1941/1984, p. 37) concluded from a series of reading tests based on poetry, scientific material, and stories that "a good reader in one type of subject matter may very likely be a poor reader with other material." Similar results were obtained by Judd and Buswell (1922), based upon fiction, geography, rhetoric, easy verse, and algebra passages and more recently by Birkmire (1982), using physics, music, and general information texts. These and other studies suggest that readers, and particularly readers who are not in the highest ranges of reading ability, will show differing abilities based upon interest, past experience, and other factors.

Change over Time

The functional literacy demands faced by Betsy Ross were different from those faced by Horatio Alger. And those demands were different from those faced by seamstresses and shopkeepers today. But what has changed? Certainly not the level of difficulty of the syntax and vocabulary of legal documents, news accounts, or public announcements. These may, in fact, have become easier to comprehend over the past 300 years. Nor has the level of comprehension required for functional use changed. *Not*, for example, had roughly the same negating function in Captain John Smith's 1608 treatise *A True Relation* as it had in Oliver North's testimony in the Iran-Contra hearings, and it requires the same level of understanding in each case.

What has changed is the quantity of printed materials encountered every day. Today's expectations for literacy application far exceed those of 150 years ago. Lincoln's claim about schoolmasters of his youth that "no qualification was ever required beyond 'readin', writin', and cypherin' to the Rule of Three' " gives a hint of this difference (cited in Johnson, 1904/1963, p. 128). With the increase in quantity of printed material has come a demand to read faster, which has been reinforced by technological changes, as suggested previously for freeway signs and movie subtitles.

How literacy demands of work interact with the literacy skills of the labor pool is not well understood. On the one hand is a tendency for literacy demands to increase over time as more facets of work incorporate tech-

nology and as service jobs proliferate in place of manufacturing positions. On the other hand, some perceive a "dumbing down" of certain service positions to meet lower ability levels of the available labor pool (Venezky, Kaestle, & Sum, 1987). However this dynamic works, change is highly probable in overall literacy requirements of work, as well as other components of everyday life. Perhaps we need a literacy index, equivalent to the consumer price index, to register yearly shifts in functional literacy requirements. With or without such codification of change, an adequate definition of literacy must incorporate changing literacy demands in some meaningful way.

Literacy and the Nonnative Speaker

So far I have avoided the thorny issues that attend literacy for nonnative speakers in a particular culture. For the most part, these are political matters best left for others to tackle. For definition making, three cases need to be distinguished. These will be framed for English in the United States, but also apply elswhere with the respective differences being considered.

1. Nonnative speakers of English, literate in their own language.
2. Nonnative speakers of English, lacking required literacy in their own culture.
3. Nonspeakers of English, lacking required literacy in their own culture.

For case 1, we expect literacy in English, but even if it doesn't develop we cannot usefully apply the label *illiterate*. These people may be non-English literate (where non modifies English literate), but it is still significant for policy and pedagogy that they are literate in some language. For case 2, we might apply the term *illiterate*, but still need to distinguish between illiteracy in the native language and illiteracy in English.

Those in case 3 might be labeled *illiterate* for their native language, but this label has no import for them (or anyone else) in relation to English. All of us could be labeled illiterate for every language we do not speak, but nothing is gained by this practice. Even if we restrict our interests to those reading in the United States, the term *illiterate* is not a functional label for those who neither read nor speak English, primarily because their illiteracy results automatically from their inability to speak English. Instruction in spoken English is a critical step in their acquisition of literacy. At a mini-

mum, we need to distinguish illiteracy as a noncontingent trait. These are policy issues, however, and not ones that depend upon deeper understandings of information processing, mental development, or any other cognitive traits.

Summary

In summary, the issues encountered in defining literacy derive from limitations in the empirical study of literacy needs and literacy practice. The issues most in need of investigation are the following:

1. Does a common psychological mechanism underlie basic reading and writing for alphabetic and syllabic writing systems? That is, can we discover a common set of psychological processes across languages that are in some sense minimally required for self-sustained literacy? If so, then we are justified in positing a basic literacy that is relatively fixed within and across cultures, and a pragmatic or required literacy that varies according to cultural demands and that often includes writing, numeracy, and document processing abilities. If not, then different definitions of basic literacy may be needed.
2. For required literacy, defined according to some accessible, present day social context, what are the levels of reading, writing, numeracy, and document processing skills required, and how do they interact? For example, to what degree can high document processing ability compensate for minimal (i.e., basic) levels of reading? We have more than 100 years of probing, poking, and experimenting with reading to draw upon, but far less empirical data for writing, numeracy, and document processing.
3. At what ages do different cultures expect their members to interact socially and economically as adults and, therefore, to reach required literacy? This issue poses a difficulty for assessing literacy in that, for most cultures, no single point is defined. Instead, responsibilities are acquired gradually according to cultural, family, and individual circumstances, with legal empowerment often playing a minor role. A fourteen-year-old mother, as a single parent, may have needs for literacy far beyond those of a single, eighteen-year-old woman living with her family on a farm. In the past, performance monitoring has been age-based, at least for the initial age at which literacy is assessed. Perhaps level of responsibility is a better selector variable than age, except that the complexities in defining this entity may far exceed its advantages.

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2

Definitions of Literacy: A Response

Reynaldo F. Macías

Richard Venezky has provided a good beginning point and summary for the polemics of defining literacy/literacies. His stated goal was to "open to critical examination the various contemporary meanings offered for *literacy*." My intent is to respond to several of the points he raised and then to move on to points of omission, which I believe must be identified if a responsible national discussion on literacy is to take place.

Venezky maintained a fairly small range of meanings in his paper, if only to make the discussion more manageable. His basic definition of literacy is not very different from many in the field and is assumed as the beginning point. He assumes that literacy skills center on the use of print and that at a minimum this requires reading and writing.

Venezky also is concerned with the threshold or minimum level of this use of print. He qualifies the range of abilities referred to as "minimal or near minimal for some goal, as opposed to advanced, as was indicated in classical times." While reserving the term *illiterate* "for those lacking totally in reading/writing knowledge," Venezky proceeds to discuss *functional literacy* and other terms, the skills required for literacy, proficiency levels, and the non-English speaking individual. His discussion of definitions is limited to adults. He states that literacy should be used as a referent for adult or near-adult abilities. He adds that "literacy rates are meaningful as indicators of population characteristics only when applied to those who need to be literate."

Venezky proposes two levels of literacy: *basic* and *required*. Basic literacy applies to the level that allows self-sustained development in literacy.

Required literacy is the literacy level required for any given social context, and which might change over time. Venezky adds that the term *functional literacy* remains useful as a general designation of abilities above basic literacy. These abilities allow some level of functioning through print in society.

Venezky argues for literacy as procedural knowledge versus declarative knowledge and cites four basic types of skills: reading, writing, numeracy, and document knowledge. Reading, of course, is primary to any definition of literacy and the other skills are, in a sense, secondary. "Writing presupposes reading. Similarly, numeracy and document knowledge are supplementary to reading, and have no role in the literacy equation without it."

In answer to the question of "How literate is literate?" Venezky identifies three necessary elements: (1) variable criteria, (2) critical levels of proficiency, and (3) allowance for change.

Venezky then identifies the definitional issues attendant to literacy and the nonnative speaker as involving at least three kinds of nonnative speaker: (1) bilingual, monoliterate; (2) bilingual, nonliterate; and (3) monolingual in a non-English language (for whom the label of illiterate in English has no logical meaning).

I am quite sure Venezky inadvertently left out "English" in his original phrasing of "nonnative speaker," since acquiring a native language is universal to all humanity. It helps that he has now made this wording explicit and specific. I would, alternatively, suggest three patterns of literacy for language minorities: native language, second language (implying no native language literacy), and biliteracy. Of course, the terms *nonliterate* or *illiterate* still are available for those with no literacy abilities at all.

Venezky describes these issues as thorny and for the most part "political matters" and defers any further discussion of their complexities.

Social Is Social

While Venezky assumed that literacy skills center on the *use* of print, I assume, and so define, reading as making sense (or meaning) from written symbols and writing as the use of a system of signs to convey meaning. Literacy thus encompasses both reading and writing. Both reading and writing are meaning construction processes and abilities with some parallel to other language/communication skills and processes. In any discussion

of language, particularly within the definitional polemics for literacy, we must identify several dimensions of the debates. We must distinguish between the abilities as competence and the use of those abilities in concrete situations as performance. These are obviously related since you can't perform reading or writing if you *can't* read or write, nor can you assess those parallel abilities absent of any performance. These distinctions become especially important in assessing various situational literacies and/or the particular uses of literacy.

With a constant and constrained definition of literacy, one can then distinguish, rather than collapse or confuse, the *acquisition* and *development* of literacy, the *assessment* of literacy proficiency, the *use* of literacy under various conditions and in various situations, the *language specific* and *language general* aspects of literacy, literacy *instruction*, and descriptions of literacy *processes/strategies*.

Normal children throughout the world acquire their maternal oral language(s) relatively easily at a similar rate regardless of the language and as a required feature of their material and human circumstance. Literacy, however, is more often than not a formally "taught and learned" set of abilities, and may or may not be socially required. Venezky has helped us guide and focus our discussion in making this last point.

He has also helped us avoid many of the hidden traps in these polemics by avoiding the term *cultural literacy* and by not succumbing to collapsing reading and writing abilities with education or many of the other notions of high culture. The English language is flexible enough to be used to talk about these other social notions without confusing them with literacy, although this is often done quite purposefully for reasons other than defining literacy.

I am not suggesting that the use of the term *literacy* to draw analogies is inappropriate. The analogical uses of the term very often confuse the issues over literacy itself as well as the analogical uses, especially in debates about school curriculum (e.g., computer literacy, cultural literacy, historical literacy, geographic literacy). For example, the debates sparked by Hirsch (1987) about cultural literacy are over *what* common cultural knowledge base should be required for a nation. He indicates that this common cultural knowledge base should be *transmitted* through the "literature and literacy" of the schools. It is part of the cultural polemics/politics of the nation.

Within this approach, numeracy and document processing, as well as the uses of literacy (primarily writing), become secondary aspects of literacy study, not parts of the definition of literacy. If we focus on the uses of

literacy, we are basically answering two questions: (1) Under what circumstances does reading take place? (Circumstance here can be read as context in its sociolinguistic sense, to include setting, purpose, participants, and channel of communication. This sociolinguistic use of "context" contrasts with the syntagmatic, and narrower, use of the term in much of the reading literature in the U.S.); and (2) Under what circumstances does writing take place? These questions allow us to organize the issues raised by the reading comprehension and ethnographic research of the past two decades, in particular, the role of background knowledge in reading comprehension; the familiarity of text structure and organization (Venezky's "types of materials," as well as the arguments for document processing); and the differential patterns of use of writing by social, ethnic, and gender groups.

It is unfortunate that Venezky relegates the definitional issues raised by language pluralism and literacy within the United States to the political realm. In several areas (e.g., language and cognition, second language acquisition), bilingual and biliteracy research are providing the more exciting intellectual and cultural experiences (cf. Kaplan, 1984). His interest in the "universal basic (developmental) processes" of literacy would seem to demand that he consider these more fundamentally than he did. I suspect, with all due respect, that his comments are bound more by his cultural blinders than he recognized or was willing to admit.

Although I suspect Venezky's point of reference throughout most of his paper was English literacy, it was only toward the end that we were given explicit cues to this assumption. Much of the literacy and reading literature produced in the U.S. assumes English is the language of concern, and usually it is. However, some of these research writings also assume that whatever is "discovered" about English must be universal to Language (with a capital L). Even when work focuses on the "disadvantaged" or minorities, language variation and non-English languages often are ignored. With over 28 million persons in the United States living in households where a language other than English is spoken, more systematic research and policy attention should be paid to the issues of bilingualism and literacy and to biliteracy itself. This ignorance, or exclusion, of multilingual issues can be called part of the politics of literacy in the U.S. Policymakers, and often researchers, express a concern for literacy in general when they really mean *English* literacy (and assimilation) alone.

Of particular concern in this area is the notion of whether (or how much) English oral language should be mastered *before* English literacy instruction is introduced (for school age persons as well as adults). Many of the literacy service centers provided throughout the country over the past

several years have turned away non-English speakers, saying, "We don't provide English as a second language instruction here." Some of these centers only now are beginning to link up with other community services or at least ask whether the individual is literate in any other language. In areas of high concentration of language minorities, we must ask ourselves whether inattention to this issue is not purposeful. This question raises the issue of scope in our discussion of definitions. Are we interested in literacy or in English language literacy alone?

We also should not forget the political uses of English literacy requirements for purposes of discrimination and social control. These involved official declarations by federal and state government agencies on the definitions and uses of literacy (quite apart from those definitional issues raised in educational or literacy training policies and programs), such as the compulsory ignorance laws of 1738-1832 and the literacy requirements for voting used to disenfranchise and exclude blacks and other minorities from political participation.

This is not an appeal to move away from English language literacy. English is our common, national language. This is an appeal to (1) take into account the characteristics of the learner, including prior non-English language literacy ability, and (2) recognize the existence of literacy in other languages within the country, understanding that these are valuable in and of themselves as literacy, and acknowledging their utility or value as a bridge or transfer to English literacy.

One last reaction to the paper involves the decision to limit the discussion to adults. Reading instruction is so central to the national school curricula that I believe we can safely say there is a societal expectation that school age children will be able "to read" by the end of elementary school. Many of the definitional issues raised in the paper were applicable to youngsters much younger than fifteen years of age and involved more than an age differential with adults.

Summary

Venezky's chapter provides a good basis for critically examining the various contemporary meanings for literacy. He shares a brief historical review of the social notions of literacy related to reading, writing, numeracy, document knowledge, and education. He particularly focuses on functional literacy and the implied abilities and levels of proficiency. If I was disappointed, it was because his paper does not focus on enough issues

and enough of the contemporary meanings available. It is a disappointment made real due to the limits of space and time.

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Part Two

Uses

3

Literacy for What Purpose?

Larry Mikulecky

- Literacy liberates.
- Literacy is used to domesticate free individuals.
- Literacy use is growing.
- Literacy use is shrinking.
- Literacy illuminates the ways of God to humanity.
- Literacy sells soap.
- Literacy spawns creativity and makes possible between individuals links that span space and time.
- Literacy serves gatekeeper functions.
- Literacy, by itself, wields no magical transforming power over learning and life.
- Literacy scholars will never produce a comprehensive social history of its uses or a comprehensive theory to explain the history of texts and readers.

Each of the above thoughts has been articulated by one or more scholars examining the purposes and functions of literacy. Though contradictory, each is probably true. Each thought, in turn, becomes false as soon as it is overgeneralized and used as an ideological platform from which to offer an oversimplified explanation of complex reality.

The purposes, uses, and formats of literacy are varied and expanding. To a large extent, how literacy is used is determined by social contexts. It is becoming increasingly clear that, in general, literacy abilities only partially transfer from one context and format to others. Many mistakes we make and have made in relation to literacy stem from misconceptions or overgeneralized conceptions of what literacy is and how it is used.

Literacy Misconceptions

Traditional misconceptions about how literacy works and what it can and cannot accomplish have influenced and limited our understanding of literacy. These same misconceptions have compromised the effectiveness of educational and policy decisions we make in relation to literacy. Guthrie and Kirsch (1983) identify one traditional misconception as the viewpoint that literacy is a unitary, dichotomous, psychological capability that is learned with the appropriate educational opportunity. One either gets literacy or one does not [see also chapters 5 and 8]. A second and related misconception is that mastering literacy in one context substantially transfers to other contexts.

More than a decade of research examining the purposes and uses of literacy has demonstrated the following points:

- Literacy processes vary widely to reflect the pluralism of social contexts in which literacy is used.
- Transfer of literacy abilities is severely limited by differences in format, social support networks, and required background information as one moves from context to context.

For example, literacy in schools often involves independent reading for answering questions at the end of the chapter or, on some occasions, carefully studying material to remember, synthesize, or evaluate it. Purposes and uses of literacy outside classrooms are rarely school-like. School literacy processes, for example, often differ from those used to read a troubleshooting manual on the job or gather information to fill in a form.

There is, of course, some transfer from reading one sort of material to the ability to read other sorts of material. Research of the past decade, however, suggests that this transfer is greatly limited. The most recent NAEP study of young adult reading reveals only about 25 percent shared variance between prose and document reading performance (Kirsch & Jungeblut, 1986). Readers who do well with many different types of literacy usually have practiced with many different types of literacy and often outside schools.

Studies in the U.S. military (Sticht, 1980, 1982) and across cultures (Scribner, 1984) indicate only a little transfer from general reading ability to specific uses of literacy [see also chapter 6]. Soldiers in a basic skills class may improve in literacy abilities while in class but not be able to transfer that gain to job performance. They will be likely to lose literacy gains once outside the practice environment of the class. Mastering the

specific processing and cognitive demands of task and format may be more key to successful literacy performance than is mastering a common core of basic literacy skills.

The Influence of Context on Literacy Purpose

Both historical and sociological perspectives provide clear examples of the overwhelming influence of context on literacy purposes, demands, and processes. A historical examination of many cultures suggests that literacy often begins as a means of recording and preserving the "holy words" that are initially read, memorized, and used with a minimum of interpretations. Literacy evolves to serve purposes of genealogy, government, commerce, and communication (Kaestle, 1985). During this evolution, the literacy processes, needed additional background knowledge, and social networks supporting literacy expand and become differentiated. When a substantial portion of a society or group masters literacy, literacy uses expand still further, and profound political and social changes often occur (Goody & Watt, 1963). Graff (1986) points out that there is little evidence that basic literacy, in itself, wields a magical transforming power for learning and life. It is more likely the case that written language can add power to our communication potential and that this increased potential can lead to the development and expansion of human potential (Harste & Mikulecky, 1984).

Critics examining literacy from a neo-Marxist perspective are quick to point out that contexts, purposes, and processes are of key importance. Limited teaching of functional skills can become an exercise in domestication (Lankshear, 1985), while the teaching of a "critical literacy" can enable teachers and students to formulate strategies to change the form, content, and social relations of education with an interest in freedom and democracy (Kretovics, 1985).

Historical Changes in Literacy Contexts in the U.S.

In the United States, fairly recent significant changes in the literate population have interacted with and helped change our national context and purposes for literacy. In 1870, only 2 percent of the population graduated from high school. Two generations later, in 1910, the proportion was still a low 8 percent. Of this latter group, 75 percent went to college. At the be-

ginning of the twentieth century, for the most part, high level literacy and education were the province of a small, elite group (Mikulecky, 1987).

Throughout the century, responses to the demands of wars and technology and heavy emphasis on public schooling increased the basic literacy levels of the majority. As more individuals mastered basic literacy, contexts began to change. It became possible to communicate information in print more readily. More complex written information became part of the social and literacy context. During World War II, the U.S. Army found it necessary to set a minimum criterion of a fourth grade reading level for acceptance into the army. By the 1980s, the criterion level became high school graduation.

During the same time period, the difficulty of newspaper wire service stories climbed to eleventh and twelfth grade levels (Wheat, Lindberg, & Nauman, 1977). Magazine difficulty levels are almost universally in the high school difficulty range (according to an article in *Reading Today*, February/March 1986). In the workplace, over 90 percent of jobs called for regular uses of literacy, and the vast majority of occupational materials (manuals, memos, announcements, and directions) were written at high school levels of difficulty or higher (Mikulecky, 1982; Sticht & Mikulecky, 1984).

It should not be inferred that higher levels of literacy are therefore required in order to function. It is possible for a few talented individuals with coping strategies to function in spite of low literacy abilities. In part, the context of increased literacy demands can be explained by the context of a more technical, information rich society. Resnick and Resnick (1977) note that, in the United States and in France, literacy demands have increased as literacy abilities have climbed. Levine (1982) points out, however, that we shouldn't infer that everything needs to be so difficult and complex in literacy terms. He uses a crowd metaphor to explain part of the phenomenon of rising literacy demands. The new context is similar to what happens when the front row of a crowd rises. Everyone else has to rise to see and participate. As the average ability level of the population increased to the high school level, material difficulty tended to rise to that level.

In any case, it is clear that the historical context for literacy use has changed dramatically. Literacy use has expanded and is intertwined with nearly every function of our society. Average ability levels have climbed (though not equally for all), and the complexity of literacy tasks has increased in reaction to the increased literacy sophistication of the population and the increased complexity of occupational and social tasks.

Categorizations of Literacy Purposes and Uses

Listing the purposes and uses of literacy in meaningful categories is a task impossible to do well. Researchers often ignore one another's categories, classifying them as too broad or too narrow to be useful. Heath's (1980) analysis of literacy use in southeastern mill towns produced the following seven categories of literacy purpose and use that fall between the extremes:

Instrumental. Information about practical problems – price tags, checks, bills, ads, street signs, house numbers.

Social-interactional. Information for social relationships – greeting cards, cartoons, bumper stickers, posters, letters, newspaper features, recipes.

News-related. Information about third parties or distant events – newspaper items, political flyers, messages from government offices.

Memory-supportive. Memory aids – messages on calendars, address and telephone books, inoculation records.

Substitutes for oral messages. Notes for tardiness to school, message left by parent for child.

Provision of permanent record. Birth certificates, loan notes, forms.

Confirmation. Support for currently held ideas and attitudes – brochures on cars, the Bible, directions for putting items together.

Other researchers (Northcutt, 1975) have employed topic categories (i.e., occupational, health, government, community). In a random selection survey of nearly 500 adults, Mikulecky, Shanklin, and Caverly (1978) found, in order of importance, the following adult purposes for reading:

1. to keep up with what is going on
2. for relaxation and personal enjoyment
3. to find out how to get something done
4. to study for personal and occupational advancement
5. to discuss with friends what has been read.

The Influence of Social Networks

The influence of social networks upon the uses and purposes for literacy has received increased attention during the past decade. Literacy use in the home, the workplace, and society in general has been found to differ significantly from school-type literacy. Heath (1980, 1983) studied 90

blacks from two mill towns in the southeastern United States. Among this group, reading was valued almost exclusively for its functional purposes (such as reading bills, signs, letters, and recipes). These tasks often were performed cooperatively.

After using ethnographic methods to study low literates, Fingeret (1983) reported intimate social networks among low literates and their friends in which services like babysitting and baking were traded for literacy help. Mikulecky (1982) reported that workers asked literacy-related questions of one another nearly twice as often as did students in school. The purposes for which one uses literacy and the way one goes about using literacy to function often are related to how one functions in social networks.

Implications of the Social Contexts/Literacy Link

Research findings on the link between literacy and social contexts suggest important implications for educators and policymakers.

1. It is inappropriate and inaccurate to assume that low literate adults are helpless in the face of generally high national literacy demands.

   Research by Heath (1980, 1983) and Fingeret (1983) portrays low literate adults as intelligent, capable human beings able to function reasonably well in their own social networks. Often literacy is "worked around" or sometimes avoided altogether. Heisel and Larson (1984) similarly report that a large sample of undereducated elderly adults had developed the skills and social networks to meet the demands of their social environment. There is little evidence to justify characterizing low literate adults as helpless.

2. Because literacy use and purpose are so closely linked with racially segregated social contexts and networks, a heavy potential exists that literacy may be used inappropriately for discrimination and gatekeeping.

   Gilmore (1985) reports that black youth who exhibit symbols of "street" behavior related to their social networks often are not assigned by teachers to academic achievement programs even though evidence suggests they could succeed. Mikulecky (1987) reports that the difference between urban and suburban schools can be characterized by dropout rates approaching 70 percent in one and college admission rates over 70 percent in the other. Neighborhood and social class values, which have become enmeshed with

race and ethnicity, play key roles in these adolescent choices.

On nearly every indicator of the most recent National Assessment of Educational Progress, average scores for whites far exceed average minority scores. For these reasons, use of credentials or general reading test data for screening decisions is likely to automatically discriminate against minorities. *Griggs vs. Duke Power Company* and several subsequent court cases have clearly indicated that literacy can only be used legally as a screening mechanism for employment when a clear case can be made that literacy tests reflect actual job demands (Mikulecky& Diehl, 1978). Such controlling precedents are not yet in place for other gatekeeping uses of literacy test scores and credentials.

3. The same social networks that support low literate individuals may function to trap individuals into remaining low literates.

Although it is important to recognize the richness of social networks and alternative ways to manage literacy tasks, it also is important to note that some social networks are counterproductive to individual and societal growth. Lemann (1986), in his insightful analysis of the relationships between race and social class, pointed out that many middle class blacks have abandoned America's inner cities. They left behind an "underclass" trapped by poverty, drugs, poor education, and a systematic pattern of innercity survival skills that are counterproductive for life anywhere else.

On an individual level, Johnston (1985) notes that some adult illiterates may have defined their marriages and other social relationships around the opportunity and need for others to help them with literacy. For these adults, learning to be literate risks destroying intimate relationships. Such mutual dependency relationships also characterize many of the social networks of illiterates described by Fingeret (1983). Some supportive social relationships and networks can help low literates to function while at the same time preventing them from changing, growing, or moving into more literate arenas. Educators and policymakers need to recognize that literacy improvement sometimes may hinge on providing the support necessary for relationships and networks to change along with their members. In other cases, literacy improvement may hinge on removing the individual or destroying the destructive or counterproductive network.

Desirable Directions

The information discussed in this paper suggests a number of positive directions and activities for educators. Initially, it suggests that students need to encounter a wider variety of contexts and uses for literacy. Since most high school students spend less time reading than most adults in the workforce, increasing and broadening school reading demands seem both desirable and possible. In addition, the nonschool community (i.e., families, churches, clubs, social service organizations, and government agencies) can be encouraged and supported to play larger roles in the literacy instruction of children and adults. With some guidance and direction, literacy instruction can occur almost naturally in the process of teaching tasks related to ordinary performance in these groups. Teaching literacy in a functional context, where it will be immediately understood, used, and practiced, is an especially effective instructional approach.

Instructors of all sorts can benefit from paying attention to how literacy is actually used within productive social networks. For example, literacy is often used in group solutions to problems. It may be that teaching students how to ask questions of peers or how to behave fairly in turntaking and returning favors may be as important to actual literacy functioning as teaching decoding skills. Using small groups of instructors and peers has been offered as a means for teaching both literacy and social contexts. Harman (1984) noted that the most effective learning occurs when learning experiences are in distinct units relating to immediate concerns, perceptions, and motivations. Reder (1985) has developed a theoretical framework for such informal literacy training strategies in his *Giving Literacy Away* monograph.

Since literacy is so inextricably intertwined with social contexts, literacy decisions almost inevitably become political and social decisions. To politically achieve a society where a maximum number of individuals have access to information and the means to participate productively implies a massive integration of informal and formal education into most aspects of our society. Harman (1984) has noted that the high incidence of functional illiteracy in the United States probably reflects the nation's high degree of cultural pluralism more than the failure of schools. In a pluralistic society, it is desirable for individuals to be able to move easily from one cultural setting to others. This suggests more training for job-specific literacy in the workplace. It suggests training parents how to help their children and suggests providing guidance to adults in most of our institutions in how to help their less literate peers. We need to become more effective in teaching

one another how to make transitions to meet new literacy demands.

Extremely destructive social and family settings need to be examined very carefully with an eye toward education that liberates individuals. Programs that teach literacy to children and their parents simultaneously are examples of educational approaches designed to change social networks. Some state programs designed to remove gang members from gangs and resocialize them in forestry programs may be another example of preparing individuals to make the transition into more productive social networks. There are still more extreme examples of proposed programs designed to force individuals out of counterproductive cycles of dependency. Controversial aspects of such programs are required literacy levels for parole from prison and required literacy education in order for low literates to receive federal or state support.

It is with extreme caution that this author even suggests nonvoluntary programs. Since differences in literacy abilities in the United States break clearly along racial and ethnic lines, there is a potential for prejudice, paternalism, and unwarranted invasion of privacy. To not address the issue of counterproductive social networks, however, is to ignore a key aspect of literacy problems. In recognition of this delicate and dangerous situation, all nonvoluntary programs attempting to change people's lives with the goal of increasing literacy and personal opportunity need to be recognized as being political in the extreme sense of the word. As political programs, they need to be monitored carefully to ensure that avenues of participation and standards of human dignity are being maintained.

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4

Literacy for What Purpose?: A Response

Arlene Fingeret

Larry Mikulecky has done an excellent job of discussing the functions and purposes of literacy, particularly in relation to individuals and their social contexts. What emerges is not a static list of purposes and functions, but a way of thinking about this issue that will continue to be useful even as the characteristics of specific social contexts change. This framework posits literacy functions as culturally relative – it respects the differences in literacy use among cultural groups and acknowledges the role the concrete social situation plays in an adult's assessment of literacy needs, as well as its relationship to effective instruction. At the same time, however, the analysis is embedded in a clearly normative framework in which literacy is identified as desirable by the dominant group in our society. It is this tension that I would like to explore in my comments.

Mikulecky asserts that literacy is so inextricably intertwined with social contexts that literacy decisions almost inevitably become political and social decisions. Indeed, literacy always has been political. Choices about who reads, what they read, and how they use what they read always have been connected to the distribution of power in a society (Goody & Watt, 1968). The literate majority, secure in its position of dominance, partially attributes its success to literacy and guards entrance into literate domains (Hunter & Harman, 1979).

The societal purposes and functions ascribed to literacy historically have been complex but basically stable, although the nature of literacy itself is historically relative. For at least the past 400 years, reading has been viewed as a moral imperative, connected to spiritual salvation and, of

course, functioning as a mode of social control. The possession or lack of literacy has been an indicator of progress in moral training and, therefore, of the extent to which one was "civilized" or, as we would say today, "socialized" (Graff, 1979).

Literacy tests for voter registration – which were maintained into the midtwentieth century – kept people disenfranchised, cut off from having a voice in their own government in the name of the greater social good. Economic ideology now is substituted for church ideology, but the inability to use reading and writing skills in daily life continues to be equated with a more generalized inability to lead productive lives as citizens, family members, and workers. This remains true even though, as Mikulecky asserts, we have learned that such depictions are inappropriate and inaccurate.

The contemporary line of reasoning claims that we are moving into an Information Age in which technological competence is central and mobility essential. Workplaces will have to change quickly to accommodate new technologies in order to remain competitive, and literacy is necessary for both learning and doing these new jobs (Hudson Institute, 1987). It is argued that the number of jobs requiring no literacy skills or low level literacy skills is declining and will continue to decline (Hudson Institute, 1987). In this scenario, illiterate adults, unable to work in these workplaces of the future, will keep America from ascending to the top of the new global order. Furthermore, by being unemployable even in the lower level jobs, illiterate adults are viewed as a double drag on the economy and a threat to national security. Obviously, these arguments ignore the realities of social class and social structure. They also ignore the complex web of forces contributing to the present economic problems of the United States and deny the dignity of illiterate adults.

The connection established between literacy and economic development provides the framework within which we see the current attention to literacy education. It is claimed that the lowest level of jobs is in the process of shifting and that literacy is necessary, not for social mobility, but for basic, entry level employment. This push is not about "empowerment" of people who are poor and disenfranchised; it is about maintaining the present distribution of wealth and power not only in America but across the planet. The purpose of literacy in this scenario is to enable adults to fit into the existing niches in the workplace.

I suggest that there is a profound ambivalence in our nation when it comes to adult literacy education; this ambivalence is connected to the potential social and political consequences of universal literacy. Universal literacy now is perceived as a necessity, which undermines literacy as a tool

of the power elite and threatens that power base. Thus, a dilemma is posed: Persons who have been in positions of powerlessness are the focus of efforts to provide them with tools that provide access to power—if only functional power by virtue of their now being able to do things they could not do previously. But nobody is talking about a redistribution of power. Furthermore, literacy scholars are claiming that the key to successful literacy education lies in the inherent characteristics and strengths of existing communities—in many ways, the very places deemed to be "causing" the problems in the first place [see also chapter 8].

Mikulecky's discussion of problems with transfer of literacy skills across contexts achieves a special significance here. To discuss the purposes of literacy as culturally relative is to recognize that, on a large societal level, literacy practices (and functions) vary among cultural groups. Mikulecky points to the potential for "literacy being used inappropriately for discrimination and gatekeeping."

Providing narrowly conceived literacy programs in which adults are prepared only for the literacy demands of highly specific job functions is one way of maintaining the gatekeeping function of literacy while responding to the need for new literacy skills in a particular context. As experience with a broader range of literacy practices is provided, adults appear to have a greater possibility for mobility and transfer of skills and, therefore, for greater self-determination (Scribner & Cole, 1981). As Mikulecky suggests, providing for this broad experience cannot be the province of any one organization. Attention to the development of literacy must be infused throughout the society, and we all must share some sense of responsibility for "helping our less literate peers."

Respect for the functions and purposes of literacy as socially situated deals with "what is" and sidesteps the issue of "what should be." Analysis in terms of functional context does not necessarily provide a vision of the ideal to which individuals, cultural groups, or society in general might aspire. Educational approaches designed to change social contexts or networks, whether they are voluntary or nonvoluntary, imply an ideal against which the present situation has been judged and found lacking. That ideal may be viewed as a reflection of the functions of literacy among the dominant power group in the society, regardless of the cultural relativism that may be implicit in specific approaches to program and curriculum.

Therefore, I would like to add to Mikulecky's recommendations. First, we must add another dimension to the current attention to learning how to learn; we must learn how to be teachers who share our learning with others. Learning and teaching, including literacy development, are social ac-

tivities that occur naturally in many settings. These processes should be supported and assisted. In addition, we must characterize the purposes of literacy on at least two levels. One is the level of functional context for an individual or for a specific group. However, we also must analyze function and purpose as they are revealed at a societal level through mechanisms such as social policy. This analysis provides insight into the reasons why we care about literacy levels and a check against the kind of paternalism and discrimination of which Mikulecky warns us.

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Part Three

Measurement

5

Measuring Adult Literacy

Irwin S. Kirsch

In 1985, The National Assessment of Educational Progress (NAEP) received federal funds to develop and conduct a literacy assessment of young adults. This assessment was the latest in a series of national performance surveys conducted since 1970 that have focused on the issue of adult literacy. As such, it continued along a road paved by these earlier efforts while also attempting to cut new paths based on recent theoretical frameworks, research findings, and new testing and assessment technologies.

Each of the earlier surveys focusing on adult literacy provided information that was used to inform public debate and to help policymakers and educators make the best decisions on ways to help improve the literacy skills of our citizens. However, these surveys did more than contribute information for use in making informed decisions; they also helped to frame the literacy problem for America. This is an important function because the way one goes about setting a problem has a strong influence on the procedures adopted for addressing the problem.

To understand how the NAEP assessment fits into this set of surveys and how it contributes to the ongoing discussions about adult literacy, I will describe briefly three approaches used to assess literacy in this country. For discussion purposes, these are referred to as the traditional approach, the competency-based approach, and the profiles approach. In presenting the information in this way, I will show how the various approaches to measuring literacy build upon each other, how they carry different assumptions about the nature of literacy, and how they vary in the kinds of information they yield.

The Traditional Approach

A growing concern over the inadequacy of self-reported literacy rates, coupled with a growing optimism for educational measurement, marked the point in our history when people began equating "functional literacy" with the attainment of certain grade level scores on standardized tests of reading achievement. With these tests, it was possible to determine percentages of various populations performing at or above specified reading grade levels. Persons estimated to be performing at or above these levels were considered to have adequate reading skills necessary to perform on materials or tasks judged to be of comparable grade level difficulty. Those persons failing to perform at or above specified levels were labeled *illiterate* or *functionally illiterate* and were presumed to lack the necessary reading skills needed to function in our society.

Among other things, the focus on reading grade level scores served to shift literacy discussions away from levels associated with learning to read and more toward the skills and knowledge associated with reading to learn. Over the past sixty years of testing, the criteria used to judge adequate levels of reading skill have risen steadily from a third grade level to an eighth grade level (Stedman & Kaestle, 1986). Some have even called for a twelfth grade reading level as being necessary to function in a technological society (Carroll & Chall, 1975).

The practice of using grade level scores to understand the literacy problems facing adults in this country carries with it certain assumptions and limitations. Grade level scores are usually determined from the average performance of an in-school norming sample over a particular set of reading passages and multiple-choice questions. These samples typically comprise children of various ages and grades attending schools throughout the country. Thus, a grade level score of 4.5 represents the average performance of children tested in the fifth month of the fourth grade. Similarly, a score of 9.0 represents the average performance of children at the beginning of the ninth grade. Given this, and the fact that reading is assumed to be normally distributed in the population, by definition half of the students will score below grade level for the year of school they have just completed. This means that no matter how good the instruction, half of any nationally representative sample will score below their respective grade levels.

Another factor contributing to performance on standardized reading tests is the manner in which reading tasks are selected into a given test. Typically, selection is based on item statistics designed to yield tests that

provide maximum differentiation among individuals. While these procedures are suitable for producing reliable and valid tests for the purposes of sorting and selecting individuals, they have proven less useful for purposes of instructional placement, diagnosing specific deficiences, and certifying specific competencies (Cross & Paris, 1987; Haertel, 1985). Yet, these are the functions these measures have been employed to serve for adults.

The Competency-Based Approach

As a result of these concerns, researchers began to recognize that measures of adult literacy could not be limited to a single grade level score determined by children's performance on school-based tasks. During the 1970s, national performance surveys, such as those conducted by Louis Harris and Associates (1970, 1971), the Educational Testing Service (Murphy, 1973), and the National Assessment of Educational Progress (1972, 1976), attempted to go beyond school-related reading tasks by including a broader range of materials that adults are likely to encounter at home, at work, while traveling, or while shopping in their community. The most publicized national survey was the Adult Performance Level Project (APL) (Northcutt, 1975). In addition to reading and writing skills, the APL project measured computation, problem solving, and interpersonal skills as they interact with the areas of occupational knowledge, consumer economics, health, and law.

For each of these surveys, nonschool types of materials were sampled and used to develop tasks that were field tested and then administered to various national samples. By analyzing responses made to these tasks, researchers could estimate the proportion of the adult population that could perform such tasks successfully. They also could determine the extent to which various background characteristics—education, race, gender, income—relate to these various percentages. Thus, by measuring literacy based on materials actually associated with adult contexts, researchers attempted to produce information based on adult materials. It was believed that this type of information would better inform policymakers and educators as to the adult literacy problem in this country.

While this approach to assessing adult literacy represents a significant improvement over traditional school-based measures of reading achievement, it also shares some of the same assumptions and limitations. First, like traditional measures, the researchers who conducted these surveys

made no attempt to analyze the tasks or to determine what factors contributed to task difficulty.

Second, with the exception of the Adult Functional Reading Survey (Murphy, 1973), which only reported the percentages of adults who responded correctly to each task, the national performance surveys summed across items to yield a single score that was reported to the public. Thus, like the traditional approach, these surveys treated literacy as an ability that lies along a single continuum with scores indicating the various amounts of this trait exhibited by an individual or group. Moreover, a single point was selected below which people were classified as either illiterate or functionally illiterate. Reviews of these surveys pointed to the fact that the estimates of illiteracy or functional illiteracy varied as widely as the measures themselves, ranging from about 13 percent to about 50 percent (Fisher, 1977; Kirsch & Guthrie, 1978). While debates ensued as to the accuracy of these estimates and the utility of a single cutpoint, critics pointed to the varying definitions, the different cutpoints used, and various types of tasks adults were asked to respond to as a basis of noncomparability of these results.

The Profiles Approach

When NAEP began to design its literacy assessment of young adults, the idea was to extend the work undertaken in earlier surveys, which had shifted the focus from the traditional approach to the competency-based approach. The assessment took from this latter approach its focus on "real world" materials. In addition, based on a growing body of research (Heath, 1980; Kirsch & Guthrie, 1984; Mikulecky, 1982; Sticht, 1978), the assessment then identified a range of uses or purposes that adults have for reading these various materials. The resulting interaction between uses and materials served as the framework for developing tasks that correspond to the various levels and types of information processing demands associated with various adult environments.

Furthermore, the NAEP assessment was not constrained by imposing an artificial set of response requirements on these tasks, as happens with multiple-choice items. Rather, in most instances, tasks required respondents to perform in ways that simulated procedures found in actual occurrences of these tasks in various settings. Examples of this included reading and responding to editorials, news stories, and classified listings in a newspaper; writing a letter to a credit department; orally explaining the differ-

ences in two types of job benefits; completing a bank deposit slip; writing a check and keeping a running balance in a check ledger; and filling in a form to order merchandise from a catalog.

Given the complexity and diversity of literacy tasks in our society, it was deemed inappropriate to attempt to categorize individuals or groups as either literate or illiterate. An approach was sought that recognized the fact that there is a broad range of proficiency levels at which people are neither totally illiterate nor fully literate to the extent that they can successfully deal with many of society's more challenging tasks. In addition, it was expected that the wide variety of activities associated with using printed or written materials was likely to require different types of literacy skills. Therefore, attempts were made to analyze and report the data in such a way as to provide a means for understanding the various types and levels of literacy exhibited within our society. It was thought that such an approach would provide a more accurate representation not only of the complex nature of literacy demands within a pluralistic society, but also of the status of people functioning in our society.

Based upon statistical and conceptual analyses (Kirsch & Jungeblut, 1986), NAEP chose to represent the diverse set of some 100 tasks in terms of three categories or families of tasks: prose, document, and quantitative. Prose literacy tasks required the reader to demonstrate the knowledge and skills associated with understanding and using information from texts that included editorials, news stories, and poems. Document literacy tasks required readers to demonstrate the knowledge and skills associated with locating and using information contained in job applications, payroll forms, bus schedules, maps, tables, and indexes. Finally, the quantitative tasks required the reader to perform different mathematical operations, either alone or sequentially, using information that was embedded in either prose or document formats. Included here were tasks such as entering cash and checks onto a deposit slip, balancing a checkbook, completing an order form, or determining the amount of interest from a loan advertisement.

Tasks representative of these three types of literacy were scaled using item response theory (IRT) methodology. IRT is a mathematical model for estimating the probability that a person will respond correctly to a particular task. To determine this probability, analyses within a given scale were carried out in two steps. First, the parameters of the tasks were estimated. For NAEP, these included item discrimination, item difficulty, and, where appropriate, guessing. Second, levels of proficiency were estimated for individuals and groups. The former provides a criterion-referenced interpre-

tation of various points along the scale, and the latter provides information yielding norm-referenced interpretations.

By estimating proficiency levels on scales constructed to range from 0-500, NAEP was able to describe and compare the distributions of various groups—the total population; white, black, and hispanic young adults; and people with various levels of educational attainment. For example, with this type of information, comparative statements such as the following could be made. While 57 percent of the total population reach or surpass the 300 level on the prose scale, only 12 percent of persons with eight years or fewer of education and 25 percent of those with nine to twelve years of education attain or surpass this level. For those who report earning a high school diploma but no certificate beyond that level, nearly all attain the 150 level, approximately two-thirds are estimated to reach or surpass the 275 level, but only 3 percent are estimated to reach the 375 level.

Examining and comparing groups of young adults who have attained various levels of proficiency and relating these levels to various background characteristics furthers our understanding as to the extent of the literacy problems facing this population. As such, the NAEP assessment provides information that goes beyond previous reports that focused on dividing the population into two groups.

However useful this information is, it was felt that additional supplementary information needed to be provided to extend our understanding of what it means to perform at various levels on each of the scales. NAEP accomplished this by selecting benchmark tasks along each of the scales and identifying variables that seemed to be related to the underlying constructs reflecting task complexity. For example, on the document scale, three variables were identified: the number of features or categories of information in the question or directive that had to be matched to information in the document, the degree to which the wording in the question or directive corresponded to that in the document, and the number of distractors or plausible correct answers in the document.

In sum, the NAEP assessment derived two major benefits from using IRT methodology: It enhanced the comparability of results across groups, age, and time, and it provided a basis for relating background and attitudinal variables to levels of proficiency (Messick, Beaton, & Lord, 1983). In addition, moving from a single comprehensive literacy scale to multiple scales extends our understanding of the construct of literacy by providing one means for describing its multifaceted nature. That is, the implementation of multiple scales makes explicit an organizing framework for captur-

ing in a useful way the diversity of tasks that previously have been reported in terms of a single score (Nafziger et al., 1975). Moreover, the process of anchoring various levels on each of the literacy scales takes us one step further in our understanding of the constructs being assessed. It is through the identification of these constructs that one comes to better understand the meaning of the proficiency scores reported (Messick, 1987) and the nature of the literacy problems facing America. It is the difficulties individuals have with employing skills and strategies that characterize the literacy problem for much of the young adult population, not illiteracy or the inability to decode print or comprehend simple textual materials.

Conclusions

In this chapter, I have tried to describe the various ways this country has approached measuring literacy skills. This information shows how each of the various approaches used existing knowledge and technologies to provide program planners and educators with useful information. As the latest in a series of surveys, the NAEP assessment was able to benefit from the most recent research information and measurement technologies. In contrast with other approaches that characterize literacy as either a single skill that is suitable to all types of texts or as an almost infinite number of competencies, each defined by a given type of text or document, the NAEP assessment demonstrates that there may be an ordered set of skills and strategies that is called into play to accomplish the range and types of tasks assessed. As such, the NAEP assessment attempted to frame the literacy problem in this country in terms of the types and levels of literacy achieved rather than in terms of the number of illiterates.

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6

Measuring Adult Literacy: A Response

Thomas G. Sticht

In his chapter, Kirsch provides a succinct overview of various approaches that have been taken to indicate the state of literacy development among adults in the United States over the past seventy years (World War I to the present). He provides a rationale for the most recent assessment of adult literacy skills by the National Assessment of Educational Progress (NAEP) and offers a brief insight into additional studies he and colleagues are pursuing.

My comments on Kirsch's chapter are concerned with two questions: What is the purpose of measuring adult literacy? How should such measurement be accomplished?

Why Measure Adult Literacy?

In September 1985, Secretary of Education William J. Bennett made a speech about plans for the future of NAEP. He commented, "Fundamentally, we all use assessment-type data for diagnostic purposes, so that we can know how we are doing, where we are succeeding up to our aspirations and where we are falling short, in order to strengthen our ability to provide every child with an opportunity to achieve educational excellence." Bennett also stated that "NAEP should develop an index of functional literacy that is consistent over time and applicable to the adult population as well as to children of school age. NAEP should then employ a fixed schedule (once every decade, perhaps, like the Census) by which it uses this index to assess literacy and illiteracy in the nation as a whole."

Combining these concerns, we might conclude that one purpose of an assessment of adult literacy is to see how well we are doing in developing the literacy skills of children as they grow to adulthood. A measure of functional literacy, administered as children progress through the school grades, would show how the children's functional literacy skills are developing over time and how such development culminates in the performance of adults. And, presumably, functional literacy would be distinguished from nonfunctional literacy. If not, then there is no need for the modifier of literacy.

In using standardized tests that are normed on grade school children to assess adult literacy skills in terms of reading grade levels, the domain of literacy assessed is considered to represent nonfunctional, academic literacy. But in many cases, the grade level is used to indicate functional literacy, too. For instance, many programs consider that adults reading below the 5.0 grade level (i.e., at the fourth grade level or below) are not functionally literate. Thus, there is not a complete separation of functional and academic literacy in terms of separate domains of knowledge or task performance.

Ignoring the conceptual problem of distinguishing functional from nonfunctional, academic literacy, use of school-based tests to assess adult literacy achievement *does* provide a developmental picture consistent with the notion that adult literacy achievement is the result of an educational process in which this nation places huge amounts of fiscal, material, and human resources. But the tests are based upon the children's school grades, and the content and process demands of the tests reflect the knowledge and thought processes the schools aim to develop. Twelve years of education is supposed to result in an educated, literate adult. In that case, the aim of adult literacy assessment should be to find out how well adults have acquired the literacy that the schools aim to develop. To assess the adults in functional literacy that is not the specific aim of the schools does not reflect properly what the schools have accomplished.

It turns out, however, that despite some claims to the contrary, if students do acquire the academic literacy skills taught in the schools as they are assessed by traditional, standardized, norm-referenced literacy tests, they are generally able to perform any number of functional literacy tests, including many job-related reading tasks (Sticht, 1975). In fact, correlations among academic and job-related, functional literacy tests have been found above .75 for various tests.

Such tests also correlate at near maximal levels, given their typical reliability coefficients, with tests such as the Armed Forces Qualification

Test (AFQT) and various tests of verbal intelligence. Because of these significant relationships, there is much to be learned from the use of grade school-normed literacy tests with adults. Such tests reveal differences among adults that can be of use not only for indicating how well we are doing in promoting achievement over the school years, but also for making predictions about which adults will learn well in future education and training programs in certain settings.

But one of the things for which standardized, grade school-normed tests are not useful with adults is to match them to an instructional program. That is because the adults are no longer in the K-12 school system, and the immediate and pressing needs they have for learning generally are different from those of children who are progressing through grade school. Unfortunately, this is precisely the major use made of such tests in most adult literacy programs. For this reason, there have been numerous criticisms of the use of grade level referenced tests with adults, along the lines drawn by Kirsch in his chapter. His points are well taken in this regard, and I will not elaborate on them.

How Should We Measure Adult Literacy?

If we wish to assess adult literacy as a means of evaluating the effectiveness of the K-12 school system, then we should consider this from an achievement test perspective. If we wish to assess adult literacy to predict whether adults in the United States can perform the myriad literacy tasks that might be encountered, we should think about this from an aptitude test perspective.

From an achievement perspective, we ask what the person has achieved by way of knowledge, ability to comprehend and express knowledge using the written language, and ability to reason about information using written language and graphic devices such as charts and forms. In the current NAEP literacy tests for adults, knowledge of content areas is not assessed (with the exception of some mathematics in the quantitative scale). Rather, the focus is upon formats (prose, documents) and complexity of information processing. Knowledge of vocabulary from domains such as science, history, English literature, and vocational, industrial, and creative arts is not assessed. Yet, this is much of what the schools aim to impart as the knowledge base upon which the literacy skills of reading and writing operate.

From the aptitude perspective, we wish to know if the literacy skills adults possess are predictive of how well they can use literacy materials in some future (outside the test setting) situation, such as learning and/or performing a job. In the final analysis, the only way to know how well a person who performs one way on a test will perform in some future situation is to follow a predictive validity paradigm in which performance on the predictor test is related to performance on some criterion task. This has been done with such adult literacy tests as the Scholastic Aptitude Test (SAT) and the Armed Forces Qualification Test (AFQT). Presumably, this could be done to establish the validity of the present NAEP adult literacy tests for predicting functioning in future settings.

How, then, should adult literacy be measured at the national level? I believe adult literacy should be measured in such a manner that we are able to accurately characterize how well adults have achieved in learning what the schools are teaching and that we have confidence in predicting how well the adults will be able to negotiate the demands for literacy in future settings. Though these may sound like common sense goals, I do not think they have guided our past efforts as well as they might.

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Part Four

Policy

7

Policy Implications of Literacy Definitions

Jeanne S. Chall

This paper raises some questions regarding the policy implications of literacy definitions. Why is policy essential for defining and solving literacy problems? Perhaps the strongest reason is that literacy is not a natural phenomenon. We are not born with it. Most of us acquire it in schools supported by public funds. This is sometimes overlooked in statements that the high or low literacy rates of this or that country can be attributed to its culture. While studies confirm that reading achievement is influenced by culture, social class, and the literacy environment of the home, other studies find that what and how reading and writing are taught and learned in school make a profound difference in literacy achievement (Chall, 1986). This is a simple point, one that three out of four people on the street would agree with, one that most parents in developing countries would agree with, but one that too often escapes some educators and policymakers.

Too often, when social class was found to be a stronger predictor than the types of schools the children attended, it was concluded that schools made little difference (Coleman et al., 1966; Jencks, 1972). Such a conclusion might have been drawn if some children had not attended school. Had a nonschool group been compared to the school group, the nonschool group would be the lowest achievers. Indeed, studies that have looked into school versus nonschool, or fewer years of schooling versus more years, have invariably found higher reading achievement and also higher cognitive development for those having more schooling. (See, for example, standardization data of reading achievement tests.)

Thus, policy, with regard to improving literacy, ultimately must make provision for the amount of schooling considered essential. This means, of

course, that we need to provide the most effective teaching by professionally trained teachers and the most effective methods and materials for students in school who are acquiring literacy. It also establishes the need for the provision of additional schooling for those who have failed to learn. Thus, it is unrealistic to hope that volunteers need have only "a degree of caring" to teach adults who have had a history of failure, unless these volunteers have been trained to teach and are supervised by professionals (see Chall, Heron, & Hilferty, 1987). To expect an amateur to succeed where professionals have failed assumes that literacy is acquired best through magic and goodwill.

To a great extent, the most essential policy for literacy already is in effect—free public education through the twelfth grade. But while this policy has achieved its purpose for many, it has done badly by others—the poor, ethnic minorities, bilinguals (particularly Hispanics), and those with learning disabilities. The early school dropouts come mainly from these groups. Their literacy problems are manifested early, and their difficulties accumulate and result in early school leaving and in such social problems as delinquency, drug addiction, teenage pregnancy, and unemployment.

Of course, one will say, some people are bound to fall into the lower end of the normal curve, and no matter what improvements are made, there always will be a group on the bottom.

True. The best policy cannot undo the normal curve. But it can set a net below which no one must be allowed to fall—unless there are handicaps that cannot be overcome. Where should that net be today? What are the standards that, if not reached, place individuals and society at risk? How much literacy is required to live productively in a complex, postindustrial society—one that is information and service oriented?

In previous writings, I have proposed that a twelfth grade reading level—one that permits the reading of a wide variety of texts written in sophisticated, abstract language and that requires a wide range of background knowledge, critical thinking, problem solving, and higher-level processing—is needed in a high tech world (Carroll & Chall, 1975). Since we provide a free education for all young people through the twelfth grade, the task for policy is how this high level of literacy can be achieved by all, or at least by more than achieve it now. The national assessments for both school age students (aged nine, thirteen, and seventeen) and young adults (aged twenty-one to twenty-five) out of school indicate that only about 40 percent of seventeen year olds in school and young adults out of school achieve this higher level of literacy. But less than 20 percent of seventeen year old minority students and young adults achieve it (NAEP, 1985; Kirsch

& Jungeblut, 1986). Thus, about 60 percent of the total population and 80 percent of minority students seem to fall below the net when it comes to the literacy needed in a modern information, technological age.

Moreover, the adult literacy problem cannot be viewed apart from the literacy of school age students. If we do not wish to deal forever with adult illiteracy, we must look where problems in literacy begin, how they can be detected and treated early and, more importantly, how they can be prevented.

In essence, policy depends upon definitions of literacy, as well as on standards considered essential for all. The definitions (or labels) in use now and in the past—definitions that come from empirical data such as NAEP, standardized tests, special adult literacy surveys—represent points or bands on a continuum. In spite of the different names given to these points or bands—many of which seem to have been invented to avoid exposing the shame of the illiterate, as well as our own shame in not solving the problem—they all seem to boil down to a matter of more or less reading and writing achievement. Some definitions cover a wide band; others, a narrower one. Some include distinctions by types of reading matter (e.g., bus schedules, application forms, medicine labels, and newspaper articles).

But here, too, the greater differences stem from linguistic and cognitive complexities in the reading matter, rather than in the type. There are easier and harder application forms, and there are easier and harder connected texts. For example, the *New York Times* article by Tom Wicker in the young adult survey of NAEP 1984-1985 is harder to read than a bus schedule not because it is an article, but because the language and ideas are less familiar and more complex, and the questions require higher cognitive processing (Kirsch & Jungeblut, 1986).

I think it is useful to see the different definitions of literacy on a continuum of literacy, from least to most. This kind of continuum is essentially what the developers of standardized reading achievement tests and the developers of readability measures have done. Standardized reading tests place readers on a developmental scale of reading skills and increasing linguistic and cognitive abilities. Readability formulas do the same for texts (from easy to hard, i.e., how much reading ability is required to read a given text). The points or bands can be converted into qualitative categories (e.g., good, average, poor for students; easy, standard, hard for texts) (Chall, 1958, 1981, 1984; Klare, 1974).

For more than a half century, we have used the concept of grade level equivalents to represent points or bands on the scale of development for

measuring reading ability and readability. Some researchers are now saying that these grade equivalent scores are meaningless or dysfunctional. When one says the grade equivalent score is meaningless, that it tells little about what the child or adult can read, I wonder if the teacher or parents would be happier with a 2.0 on a standardized achievement test rather than a 4.0. Most parents and teachers would be happier to have a 4.0 than a 2.0, and most know that a 4.0 is better.

The standardized test score does not tell us whether children or adults are reading on their own, whether they read for pleasure, or whether they love or hate to read. But, unless the students "cheated," or forgot to use their IBM pencils, or failed to match the numbers on their answer sheets to the question booklet, the score gives a lot of information, such as where students are on a broad continuum of reading achievement and the level of books they can read. The recent criticism that the grade equivalents from standardized tests do not coincide with readability levels has not considered the existing research evidence. Considerable research over a fifty year period indicates high associations between test scores and readability scores. In spite of cautions against using standardized test scores for selecting appropriate instructional levels (IRA, 1982), we find them highly useful in the Harvard Reading Laboratory (Chall, Curtis, & Fletcher, unpublished paper).

Broader, qualitative distinctions do add to the usefulness of quantitative scores. Several years ago (Chall, 1983), I proposed such a scheme of six stages of reading development to bring greater understanding of the qualitative measures of reading. (See Table 5-1, pp. 85-87 for a brief overview of the six stages, the typical school grade equivalents, and the qualitative changes in reading skills, language, and thinking as the student progresses to each higher stage.)

I have since collapsed these six stages into three broad adult literacy levels, and I present them here, noting grade equivalents on standardized reading tests and the stage level from Chall (1983). I note also the descriptive category from the NAEP scale (1985) that seems to correspond to the three adult levels.

The lowest adult literacy level is one *below functional literacy.* It ranges from adults who are completely illiterate to those who can read only the simplest labels, signs, and texts. This level includes those on Chall's Stages 0 (Prereading), 1 (Decoding), and 2 (Fluency); first to fourth grade level on standardized reading tests; and the Rudimentary and Basic levels of NAEP.

The second level, often referred to as *functional literacy,* permits the

reading of simple texts, such as a local newspaper, the easier articles in digest magazines, and a newspaper like *The Enquirer.* This level covers Chall's Stage 3, Reading to Learn the New; reading grade levels four to eight on standardized tests; and the Intermediate level on the NAEP scale.

The third level, *advanced reading*, permits the reading and learning of difficult materials—high school level textbooks, technical manuals in industry and the military, national newsmagazines such as *Time* and *Newsweek*, and a difficult newspaper like the *New York Times*. It includes Chall's Stage 4, Multiple Viewpoints; nine to twelve grade levels on standardized reading tests; and the Adept level on the NAEP scale. (See Chall, Heron, & Hilferty, 1987.)

So far, I have emphasized one central question in social policy—defining and measuring literacy. Overall, I think we know quite a lot here. The recent surveys and definitions can be a source of growing consensus. Furthermore, although we need better tests for measuring adult literacy, I think we can still learn much from those we have. Indeed, we know enough to realize that the situation is quite serious. Too many adults read poorly even on the limited measures we use.

The next central question (harder, I think, than that of measuring literacy) is that of how much literacy is needed. What are the literacy needs for today? I will divide needs into three categories: civic, occupational, and personal.

Let us take the civic first. What literacy tasks are essential for citizens of our country? What must we be able to read?

These questions are currently the subject of a lively debate set off by Hirsch's *Cultural Literacy* (1987), and particularly his list of essential terms that he says all Americans need to know. Many reject the list as class and Western biased.

Mortimer Adler makes our task simpler by stating emphatically on his many TV appearances that all Americans should read the founding documents—the Declaration of Independence, the Constitution of the United States (particularly the Preamble), and Lincoln's Gettysburg Address. Adler feels that these documents should be read, like the Bible, over and over again.

If Adler's literacy tasks are accepted as essential, what level of literacy would be required? A readability analysis indicates that all are at a high level—an advanced level in our three level adult literacy continuum. The Gettysburg Address is somewhat easier to read and understand, testing at a ninth grade level. The Declaration of Independence and the Constitution are harder—both testing on a college level (Chall, 1987). All of the docu-

ments are difficult however you define difficulty and however you measure it. To read them, one must read on at least a high school level (Stage 4, Multiple Viewpoints, Chall; Adept level, NAEP). The documents are difficult because the ideas as well as the words and syntax are difficult. To read and understand these documents requires at least the equivalent of a high school education.

What about more modern, more practical civic literacy needs – those needed primarily for daily living but still of civic importance? We could include the reading of newspapers and the reading of forms and instructions, such as federal and state income tax forms, instructions for applying for food stamps, and notices from the telephone company. When these forms and instructions are analyzed or tested on representative readers, it is shocking to learn how difficult they are and how common it is for the difficulty level to be above the reading abilities of most of their intended readers. The many attempts to simplify the income tax form and instructions have not been noticeably successful.

Let us turn to occupational literacy. How will we determine that? Sticht (1975) has shown us the way in his studies of literacy requirements in the military. He analyzed the readability of the instructional manuals for different jobs in relation to the reading abilities of soldiers who needed to read them. Mikulecky (1981) made similar analyses for blue collar workers.

These materials also are harder than most of us think. Sticht found most technical manuals in the military to be written on an eleventh or twelfth grade level. Only the cook's manual was lower – on an eighth grade level. And Mikulecky (1981) found similar levels of difficulty among technical manuals written for many blue collar jobs.

We need such information on a wider range of occupations. Such information will be useful in guiding young people and adults with reading problems in the selection of occupations. This information also is needed to alert writers of these materials to make the materials as readable as possible.

What about personal needs? How literate does one have to be for the "pursuit of happiness"? These are perhaps the most difficult questions to agree on, since many people do not read much, getting most of their entertainment and news from TV. But what about traffic and street signs and the print on medicine, food, and beverage packages? What about books? Should we all be able to read Dr. Seuss but not Dr. Kissinger?

Reaching consensus on the foregoing questions could help us make policy for adults seeking help in adult literacy programs and could help us

plan the literacy development of children and young people. At what age or grade should various standards be reached? I believe this is one of the most important aspects of social and educational planning. Even for preschoolers, structural systems must be developed for judging whether progress toward literacy is being made; if it is not, the necessary education must be provided. For school age children, we need to know at what levels intervention is most constructive. We need to apply to literacy development the same kinds of safety systems – signaling, whistle blowing – used to avert collisions in the air.

This brings me to my third point – the importance of standards at various points of development. In a sense, schools have become more humane in recognizing individual differences. But in doing so, too many children are falling through the cracks. They do less well than they could or should be doing.

Schools spend millions upon millions for standardized achievement and other tests. But they do not use the results sufficiently for blowing the whistle, indicating that students are falling below standards and that steps must be taken to get them back up.

What should the standards be? For the past decade, schools have used minimum competency tests, but these are not fully helpful since the evaluations regarding competency depend more on the amount of remedial funds available than on absolute scores. Usually, only the poorest achievers are selected for help, and they could just as easily have been found by their teachers.

We need to agree on minimal standards at every age and grade – on the minimal standards for providing remediation and special help as early and as long as needed, not just standards for retention.

Regular reviews also are needed of children's literacy development during the years they are in school. When schools are found to produce too many individuals who need extra help, their reading programs – from preschool to twelfth grade – their libraries, and their encouragement of children's reading, must be examined.

Conclusion

I have proposed some questions with regard to needed policy on effecting optimal matches between the literacy needs of a high tech society and the literacy attainment of individuals. Both are viewed as developmental and can be placed on quantitative or on qualitative stages.

I have painted a picture showing considerable gaps between literacy needs and literacy attainments for all – particularly for the poor, minorities, bilingual, and learning disabled. The policy implications suggest greater efforts in education in setting standards and in developing improved programs and additional remediation.

On the chance that I will be faulted in suggesting standards that are too high, I checked with Wechsler's (1944) estimates on the distribution of intelligence among children and adults and found that about 75 percent are considered of normal or higher intelligence – 50 percent of average ability, 16.1 percent of high average, 6.7 percent superior, and 2.2 percent very superior. Since the limit of reading ability often used is that of verbal intelligence, how should we view the NAEP findings that only about 40 percent of all seventeen year olds and young adults and about 20 percent of minority students can read on a level considered normal for high school students? Also, how can we explain the large numbers of students admitted to community and four year colleges who can read only on an eighth grade level or lower? If we accept the fact that the students are all of normal intelligence and that cognition is the ultimate limit of literacy, why the serious gap? Why can't at least 75 percent of seventeen year olds and young adults read on an advanced level? This is a problem for social and educational policy.

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8

Policy Implications of Literacy Definitions: A Response

Carl F. Kaestle

Jeanne Chall is a noted authority on reading, and her work has had a great influence on the teaching of reading over the past three decades. She argues in her chapter that our policies help define literacy and that, for her, the most important policy is the provision of schools. We have set up a universal, free public school system and then defined literacy as a certain grade level reading achievement. She also argues that literacy ability lies on a single continuum and that grade level equivalents are reasonable expressions of points on the continuum. The standard of adequate literacy has risen as more children got more education.

Today, we expect children to continue in school until grade twelve, and since many adult reading materials are written at that level, Chall argues that we should define adequate literacy as a twelfth grade reading ability. She supports that argument with evidence that people need twelfth grade reading skills in several different contexts, such as work and citizenship, and she argues for school policies that will bring as many children as possible to this level, with more testing and more remediation at each level.

Chall argues that literacy policies affect literacy definitions and that definitions affect policy. I'm not sure which direction is predominant, or whether it matters. Does policy flow from definitions of literacy we arrive at through other means, or do we seek definitions that will serve our policy convictions? Some of both, I imagine. Nonetheless, new definitions, concepts, and arguments about the nature of literacy can arise from theoreti-

cal, empirical, or philosophical sources and can have consequences for policy, so definitions per se are worth contemplating and debating.

Chall sees recent literacy surveys as "a source of growing consensus" about the definition and measurement of literacy. I don't see the consensus, so I'm going to emphasize some competing concepts. Although we can state them as outright contrasts, they are actually differences of emphasis. In defining literacy, different people emphasize different aspects and set different policies for improving people's literacy. However, the differences of emphasis are not trivial. They have important policy consequences. The fact that I may allow your main emphasis as a caveat in my definition, and vice versa, does not change the fact that we draw starkly different policy conclusions from our contrasting definitions.

The first contrast one finds among definitions of literacy is between those who define literacy as a dichotomous variable and those who define it as a range of skills. People who think of literacy as an either/or proposition tend to talk about problems of the illiterate and argue about how many people are illiterate. People who think of literacy as a range of skills talk about problems of literacy, not illiteracy, and they include almost everyone but themselves in the potential problem group.

The dichotomizers define a cutoff point and then talk about everyone below the cutoff point as illiterate – whether it is people who cannot decode the simplest words in print (perhaps 5 percent of the population) or people who cannot read at the eighth grade level (perhaps 20 to 30 percent of the population) or those who cannot get a high score on the Texas Adult Performance Level test (35 to 50 percent of the population). Lumping people as illiterates is useful for dramatic purposes in the political arena, but it doesn't match reality.

Kozol's *Illiterate America* (1985) is the best example of this tactic and its problems. He included among the illiterate people who are utterly illiterate along with those who read parts of a newspaper every day, can handle the reading required on their jobs, and do not consider themselves illiterate. A majority of Kozol's "illiterate" Americans read at a level between fifth and eighth grade and probably would not seek to improve their literacy, especially from a program that defined its clients as illiterate. Workers in adult education know this, but they rely on clarion calls like Kozol's to dramatize the literacy issue, to get public attention, and to elicit better funding. So when Kirsch (this volume) began saying, on NAEP's behalf, that the big problem was literacy, not illiteracy, some adult educators got nervous, fearing that NAEP's message would encourage people to focus on school training and neglect adult literacy programs. It need not be so, of

course, but it does illustrate the important implications for policy of how you define the problem.

One of the prominent icons of the literacy movement of the past few years—a negative image seen on a common TV public service spot—is a man, frustrated and ashamed, stuttering and unable to sound out the words of a children's story to his little girl. This sort of image dominates the campaign to fund adult literacy programs. But it should not be imagined that the man's agony is shared by all the people included in estimates of so-called illiteracy that range above 10 percent of the population. One of the biggest problems in reconciling research on literacy with publicity about illiteracy is how to face middle range literacy problems and still keep the attention of the public.

My second contrast is between those who argue that literacy is adequately described as being a single continuum and those who emphasize that it is a collection of discrete, definable skills. The policy implications of these two concepts are perhaps more subtle than with the previous contrast. Those who think that literacy abilities lie along a single continuum tend to emphasize school-based literacy and grade level equivalents. Conversely, the concept of distinct literacy skills encourages one to explore nonschool uses of literacy and to incorporate in school training a detailed analysis of different reading skills needed by adults. Heath's (1983) assessment of the functions of literacy in everyday community life encouraged people to think of literacy skills outside the linear, hierarchical framework that shapes school instruction.

The NAEP young adult literacy assessment analyzed the skills necessary to read diverse adult prose pieces and identified three major areas of literacy ability: prose comprehension, document literacy, and quantitative literacy. The researchers then set out to specify more particular skills within these areas. Prose comprehension, for example, included such skills as finding information, interpreting information, and identifying themes or organizing principles, while document literacy depended upon abilities to match several features and handle distracting information (see Kirsch & Jungeblut, 1986). Emphasizing the diversity of literacy abilities leads to a wider analysis and new instructional possibilities.

The third contrast among definitions of literacy involves the distinction between skills and content, which has become exaggerated, and even politicized, in recent discussions. The background was there in the "back to basics" movement and the frustration of many people in the 1980s with the prominent attention to cultural pluralism in the 1970s. Some believed that the schools had retreated from cultural tradition and were emphasizing not

only cultural but moral relativism. Cognitive psychologists came to emphasize the importance of knowledge in the development of skills within different domains, and then Hirsch (1987) put it all together by defining true functioning literacy as a matter of content, not skills. He argued that in the 1960s and 1970s teachers defined literacy as content-free skills and shaped the curriculum accordingly. The pendulum must swing back, Hirsch said, toward a corpus of common literary, historical, and scientific allusions needed to effectively understand adult prose in our society.

At its best this is an argument between those who emphasize the wisdom of received tradition and the importance of common reference points for a democratic society and those who emphasize the cultural diversity of our society and the importance of critical thinking and reading skills for a democratic society. At its worst, this debate is symbolized by permissive, liberal teachers who have slid into a flabby curriculum on one side, and by narrow, conservative reformers who want people to memorize fragmented facts on the other. Definitions of literacy can incorporate both skills and content, but a heavy emphasis on one or the other has enormous policy implications.

Nonetheless, one might ask if the practicing educator really has to care about these contrasting definitions. Isn't there a lot of overlap in what you'd actually do? The answer is yes, there is much overlap. In some ways, literacy training is the same whether we're talking about school or nonschool reading, whether we emphasize skills or content, and whether we're constructing K-12 programs or adult education programs. The practicing literacy educator takes individuals from whatever literacy skills they have and tries to muster resources to get them farther along some rough continuum of reading ability.

However, definitions of literacy *do* matter. In the background, we must have a concept of the purposes of literacy from which to define literacy and from which to draw policy and training strategies, given the fact that concepts have different ideological and practical consequences. Not only are there reciprocal causal relationships between definitions of literacy and policies about literacy, but behind these different definitions and policies are differing visions of what kind of society we are and what kind of society we aspire to be.

My perspective (call it reformist if you wish) represents a middle ground between taking society as it is or arguing literacy for revolution. I think that enlightened self-interest, the long term collective interests of our society, demands that literacy efforts not be geared to the society as it is—to better productivity and better individual coping within the current politi-

cal and economic structures. Instead, literacy efforts must be aligned with social reform, with a vision of a more participatory society.

I don't deny that many people need basic skills to get along *now* and would be better off for having them. But ours is an idealistic society, so I urge us to develop an ideal for literacy that envisions change – more participation in the workplace, more participation in politics, richer lives, and more avenues for the use of intelligence. This is a Jeffersonian concept. It can be wedded to a productivity goal, but it can't just be left out.

Let me give a concrete example. We think of insurance companies as white collar workplaces with lots of tasks demanding literacy. Actually, insurance companies are very hierarchical and rule governed. Many employees have little education beyond high school and perform in a highly supervised setting. A narrow concept of workplace literacy in this industry might be training people for a revised program for data entry, tightly work-related for a task within the present structure. Such training is necessary. There's nothing wrong with it, and there may be some spinoff in terms of general skills. But much of what gets counted as industries' investments in literacy training is of this type. A broader concept of literacy, a more reformist concept, might involve two different kinds of training: (1) training adjustors in medical terminology, which is work-related but envisions an enhanced role for them – more responsibility and more participation in policy discussion; or (2) general literacy training, voluntary, for an enhanced life or job mobility.

In *The Subtle Danger* (Venezky, Kaestle, & Sum, 1987), we referred to a long term gradual threat from literacy problems, not an imminent crisis. I'd like to reassert that concept. What's at stake is not just the trade balance of the next five years but the viability of democracy fifty years from now. What's at stake is not just upgrading people's competence at handling bureaucratic forms but the future structure of opportunity.

Congress is not accustomed to thinking fifty years into the future. Nor do most adults in literacy training see it as a way to change society or the workplace. But that doesn't render these larger issues irrelevant to defining literacy or designing policy. The future will not take care of itself.

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Part Five

Summary

9

Gathering Up, Looking Ahead

Richard L. Venezky

What do the preceding eight chapters (plus the hours of discussion that they engendered when presented at the University of Pennsylvania) say about defining literacy? Can a consensus be discerned on any vital issue, or was diversity of opinion the primary message? In this concluding section, I will attempt to pull together the most basic issues raised in the preceding chapters and to give an interpretation of the positions presented on each. Since not all were discussed at great length, and votes were not taken, I cannot state with authority that this or that percentage of the authors and discussants agreed or disagreed on any particular point. Instead I will draw together those positions that were most rationally stated, that held up best to criticism, and that contribute most directly to the theme of this text.

Goals for Literacy Definitions

A definition of literacy serves both practical and psychological ends. For policymakers, a clear, operational definition of literacy is required to determine the need for literacy efforts and to evaluate the outcomes of specific policies. For program planners, a clear definition is a required starting point; however, program goals may be tempered and supplemented by the more specific needs and interests of a given clientele. From a broader perspective, a definition of literacy must be firmly grounded in a knowledge of adult literacy processes and adult world views, however variegated they might be. A definition of literacy based upon school-related norms, such as grade level scores or text readability, implies a relationship between

school-based reading instruction and adult literacy that is not only unsupported but also counterproductive to the design of effective adult instruction.

In contrast to these practical goals are the more subtle, psychological aspects of a literacy definition. For those at the bottom levels of the socioeconomic scale, and especially those who suspect society of having little compassion for their plight, a definition that is couched primarily in terms of society's needs (such as the Unesco definition of the 1950s) is unwelcome. For the elderly, a definition biased heavily toward work and productivity is equally undesirable. And for individuals literate in their native language but not yet literate in English, a definition that classes them as totally unlettered is degrading.

In some cases, these concerns speak directly to the specific wording of a literacy definition. In others, it is the justification for the definition and its expected consequences that are at issue. Together, these concerns should encourage a definition of literacy that is not only clear and operational but one that is respectful in wording and intent of the various needs and situations of both individuals and society.

Literacy and Social Control

It is difficult to discuss literacy without confronting the issue of social control, and this collection of papers represents no deviation from this norm. Are we an evil society, sustaining power and control by a self-elected elite through manipulation of literacy, or are we an imperfect society, honorable and just in our intents, but still striving to reach our intended goals? In fairness to the opinions stated here, no accusations of overt conspiracy were made, but the flavor of the social control argument was unsettling, nevertheless. It is probably true in all societies that those who have less want more and that part of the process in the legitimate climb to higher attainment is to emulate the styles of those above you in society. Thus, the dress, speech, material possessions, and social conventions of the middle and upper classes become, by choice, the aspirations of the lower classes. This appears to be true regardless of forms of government, yet it is often misinterpreted as control of the lower classes by the upper ones rather than as a natural direction in choice of styles.

This is not to deny that there are coercive elements in any society that has class differences, but the pressure for conformity in specific forms of

behavior does not by itself constitute evidence for far-reaching social control. Furthermore, the specific arguments in regard to literacy create a Scylla and Charybdis through which no national policy, no matter how enlightened, can sail unharmed. If attempting to teach a form of literacy that allows full participation in society is social control because it does not prepare for the reform or overthrow of that society, then so is not teaching such a form of literacy, because by definition it denies access. At times, our rhetoric and our more abstract beliefs may blind us to the compromise necessary for progress in an imperfect world.

Most participants in the current endeavor seemed to agree that teaching job-specific literacy seldom empowers individuals to rise to higher levels of occupational status. Training for punching the hamburger and french fry keys on the fast food register is inadequate for advancement to managerial positions in such enterprises. On the other hand, training for advanced literacy levels is extremely expensive and time consuming. Without incentives for both the training organization and the individual, relatively few individuals graduate from such brōad training programs. For many, the skills that are acquired often do not transfer directly to specific literacy contexts, such as reading a health warning or writing a request to a child's teacher.

For those who judge American society to be basically just but imperfect, adult literacy is a requirement for both individual and social needs. However adequate an oral support group might be for one with minimal literacy skills, it can never replace literacy itself. Our form of government requires that every citizen be able to make independent judgments, not only about political candidates and policies, but also about employment and lifestyle. Ours is a demanding form of government, requiring the intelligent participation of the masses for survival. Illiteracy may be a right that individuals could claim, but it is not one that we as a society should be proud to grant.

A Definition of Literacy

Literacy denotes a collection of abilities within which specific ability zones can be designated for practical ends. At the lower levels of these abilities there may exist (but the evidence is not complete) a universal set of reading and writing skills necessary for self-sustained literacy growth. This zone represents a minimal level of functioning ability that is inadequate for many ordinary demands of an industrialized print society. Higher

up the ability scale another zone can be defined, based upon criteria that vary for individuals and societies. This zone represents levels of literacy abilities that are required for full participation as an equal member of a specific society. This higher zone incorporates reading, writing, numeracy, and specific document processing skills, although the levels for these skills are not precisely defined for any known context. Furthermore, where literacy ends and problem solving, logical thinking, and related cognitive skills begin is also not well defined.

Literacy by itself does not create health, wealth, or happiness. It is a platform from which the quest for these goals can be launched. A sharply bounded definition of literacy is not as important as the understanding that literacy must be coupled with other abilities to achieve the individual and social goals that most of us agree are desirable for this country at the end of the twentieth century.

If policymakers are uncomfortable with a definition of literacy as a collection of skills rather than as a single continuum where precise cutoffs can be defined, then perhaps as scholars and teachers we must work harder to show that oversimplification is counterproductive. Simple literacy scales that declare, ex cathedra, the number of illiterates in America, are meaningless. What is needed is a definition of the ability levels required for different social contexts and individual life goals and the abilities of the adult population relative to these norms. Furthermore, we need realistic estimates of the time and costs involved in moving individuals up the ability ladder. Stamping out illiteracy achieves little by itself in an advanced industrialized society. What are needed are higher competency levels, and higher levels of literacy are a required underpinning.

Remaining Issues

Within this context, many issues remain unresolved. Chief among these are the following:

1. How can general and specific literacy training be balanced? This is a practical issue, dependent upon resources, individual motivation, and job relationships. Highly specialized work responsibilities within a strictly hierarchical decisionmaking structure provide little incentive for either management or workers to engage in general literacy training. But where workers participate more fully in the total functioning of an enterprise, higher general literacy potentially benefits all. Thus, the type of literacy training and work rela-

tionships are coupled.

2. How can nonschool resources—family, business, church, etc.—be mobilized for literacy training? Throughout most of America's history, literacy was a distributed responsibility. Only in the twentieth century, with longer periods of school attendance, has the school been viewed as the sole locus of this teaching. But for many citizens, formal schooling is inadequate for basic intellectual needs. For these individuals—dropouts, immigrants, or whatever—other instructional settings are required.
3. How can elementary and secondary schooling be adjusted to ensure that adequate functional literacy is taught? At present, the school literacy curriculum is strongly tied to literature. Regardless of an individual's needs or desires, reading and writing are taught primarily within the context of narrative fiction. For the best and the brightest, functional literacy skills are acquired, either through this literature emphasis or in spite of it. But for many others, functional literacy does not result—at least not at the levels desired for the present day. Some fear that teaching functional literacy will trivialize the curriculum, with images of reading lessons built around bus schedules, pie charts, and medicine labels. Others see a more complex cognitive base to the skills required for functional literacy and an unrealized opportunity to build literacy around problem solving, a general skill that many feel receives inadequate attention in the schools.
4. How can teachers be trained for adult literacy work? Many adult literacy programs are conducted by volunteers, thus implying that minimal training is required for teaching adults to read and write. In many cases, this situation reflects the low levels of aspiration for literacy programs; in others, the lack of trained instructors.

Much more could be said on this topic, and no doubt much more will be said over the coming years. Ours is not the last word, but we hope that from what appears here, the debate on adult literacy can be more sharply focused, the needs for more research and more reflection more evident, and the solid ground of consensus more accessible to policymakers and program planners.